

# CLUBBED



## Networking:

Your doorway to sharing:

# INTERNET

# FILES

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### Also in this issue

#### News:

Alt.WoA and K4 show reports  
PCI Update

#### Features:

Reader's Wives

#### Reviews:

Draw Studio 2  
Photogenics 5  
Earth 2140

#### Support:

Samba Printing Tutorial  
Draw Studio Tutorial

Issue 8, Spring 2001

## For Amigans, By Amigans, On Amigas!



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## Do The Write Thing

We'd like to make Clubbed more "interactive" so we need your input!

**Got a question** you'd like answered or an opinion you'd like to share? Write to us and we'll include it in a letters page.

**Got a tip** for other readers or even an article up your sleeve? Send it in and you could very well see your name in print.

**Got a suggestion** or comment on the magazine? Let us know and we'll try and make Clubbed better for you.

# Amiga Show "Dahn South"

Ok lets get the bad news out of the way first, there will be no SEAL-O-RAMA in 2001, boo hiss I hear you say (well possibly), now for the good news SEAL, ANT, Kickstart and ASA will be hosting a new show, World of Amiga South East which will be sponsored by Amiga Active! This show will be held at Hutton Poplars Hall, Brentwood, Essex (10 minutes drive from the M25 Junction 28 or 10 minutes walk from Shenfield station) which is a larger not to mention plusher and more expensive venue than any previous UK usergroup show.

So who's gonna turn up at this party then? Amiga are expecting the AmigaOne and OS 4 to be available to purchase at the show, and Fleecy Moss will be attending in person. As manufacturers of the AmigaOne, Eyeteck will have a strong presence at the show (lets hope they bring enough A1's for everyone who want's one). As sponsors of the show Amiga Active will be attending and you can expect to see extensive coverage in their magazine. Also confirmed are (in alphabetical order) Analogic, Blittersoft, Forematt Home Computing and Kicksoft. We are also currently in negotiations with just about every other UK based Amiga company out there (and several overseas) and it's looking positive at this early stage.

Hyperion will be in attendance and are sponsoring the games arena, where you will be able to compete against other Amiga fanatics to win copies of the latest Hyperion games. There will be many other attractions at the show in-



Outside the venue (top)  
The main hall (bottom)

cluding presentations held in a separate suite. Topics are likely to include the AmigaOne, Amiga OS4, and various applications, keep an eye on the show website for details.

The venue has a licenced bar that will be available throughout the show (hic) and we will also be providing snacks and hot drinks for the hungry and thirsty!

This show will be the first in the UK to showcase new Amiga computers since the release of the A4000T in 1997, it's what we have all been waiting for all these years, visit the show website now to find out how to get your ticket, go on it's only £3!

[www.worldofamiga.co.uk](http://www.worldofamiga.co.uk)



The modern room  
for presentations.

## Nick Bigadike

We have some sad news to report, long standing SEAL member Nick Bigadike passed away in May 2001.

Nick was one of SEAL's founding members and has always been a regular at meetings, even before we had a venue and used to meet at member's homes. Nick used his Amiga for professional video work and gave an excellent SCALA presentation to the club. One of SEAL's most colourful characters, Nick was always ready to debate the latest news and offer his opinion based on industry experience. He was always looking forward to the next generation Amigas and it's sad he will not be here to see them released.

All at SEAL will miss Nick, and we offer our condolences to his friends and family, particularly Tracey his partner.

## Editorial

We're finally here with another issue of Clubbed, welcome to the all the new subscribers who joined us at the Alt.WoA and Kickstart 4 shows (for those who couldn't attend these events we have reports starting on page 4) sorry you had to wait so long for this issue. Talking of shows you'll now know all about the new World of Amiga South East show that SEAL is organising with ANT, ASA and Kickstart. With four big usergroups involved, two of whom have run shows before, we are bringing a lot of knowledge, resources and energy to the show. The combination of this with new Amiga software and hardware releases should make World of Amiga South East something really special, and there's only one way to find out if we pull it off, come along on the big day.

Since the last issue some big things have been announced by Amiga and their partners, in particular Eyeteck. It looks like we may well be seeing new hardware in the form of the AmigaOne 1200 accompanied by a new OS version in the form of 4.0 in October. Read all about the announcements in our Amiga Update on page 9. In the mean time it has to be said that things have been pretty quiet in the Amiga marketplace, new software releases have been very thin on the ground.

One area of the market that is very definitely not quiet are the PCI bus boards! There are now three companies: DCE, Elbox and Matay with boards available to buy and all three have further products on the drawing board. With so much PCI news to report we once again have a dedicated PCI Update feature on page 12.

In this issue we have several articles on networking, an area of computing that can be very complex and frustrating. However when you do get a network up and running it can be incredibly useful especially if you have several people who want to use your computers. Hopefully you'll find our net-

working feature acts as a good introduction to the topic and helps you decide which combination of the network hardware and software is right for you. Then we have a big list of links to resources that should help you with the detail of setting up your network (we couldn't possibly cover this in detail, the feature is already the longest we've ever had). Finally whatever you think of Microsoft and Windows many people have a Windows PC in addition to their Amiga so we cover setting up shared printers with Samba, a topic that doesn't seem to be well covered on the 'net.

If you have subscribed to Clubbed for some time you'll no doubt have got used to the fact that the magazine rarely comes out on time (but it does always come eventually). We are sorry about this and we do try our best to be on time. As I hope you appreciate with everyone volunteering their services, work, family and other SEAL matters (organising meetings and shows for example) often interrupt our production. Anyway all that has to change for the next issue as we have to get issue 9 out in time for World Of Amiga South East. We always appreciate contributions to the magazine but because of this tight deadline they would be doubly appreciated for issue 9. If you have ever thought of writing something or sending in some of your work for inclusion in Clubbed now is the time to do it! Remember we accept any type of article as long as it's Amiga related, an opinion piece is just as valuable as a review or tutorial. Also if you don't feel up to writing something major, don't worry, why not try something short like a PD software review? I would only ask that before you embark on a major contribution please contact me (at any of the addresses in the .info panel) to ensure someone else isn't already working on something similar. The deadline for contributions to issue 9 will be mid September 2001.

Enjoy the mag,

Robert Williams, Editor

## Clubbed.info

Clubbed is published quarterly by South Essex Amiga Link. For subscription details please contact us at the address below or visit our website.

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### Only Amiga Made it Possible

Clubbed is designed and laid out using:

#### Hardware:

Amiga 3000  
CyberStorm PPC/060  
CyberVision PPC  
128Mb RAM, about 8Gb HDD space.

#### Software:

Amiga OS 3.9 by Amiga  
PageStream 4 by Softlogik  
ImageFX 4 by Nova Design  
Photogenics 5 by Paul Nolan  
Final Writer 5 by Softwood

There are also some essential utilities we couldn't live without: Directory Opus 5, SGrab, MCP, Turbo Print 7, MakeCD.

Our thanks to the creators of this and all the other great Amiga software out there.

Clubbed is entirely created on the Amiga, no other machines are used at any stage of the design or layout process.

### Legalese

The views expressed in this magazine are those of the author of each piece, they do not necessarily reflect the views of the editor, other contributors or SEAL.

Please Note: Clubbed is produced by SEAL members in their spare time, while we will always strive to produce the magazine on time and include all the advertised contents this is not always possible due to other commitments. The price you pay for Clubbed covers our costs and nothing more, we don't make a profit from it.

If you wish to contact a contributor please send your message to one of the addresses above and we will pass it on.

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# SEAL Update

## AGM

SEAL held its second Annual General Meeting on the 16th of March. The meeting started with an overview of SEAL's activities in the past year which was followed by Financial reports for SEAL and Clubbed magazine. The main task of the AGM is to elect the club committee, three committee posts were vacant as Gary Storm, Roy Burton and Jeff Martin had decided to step down (thanks to them for all their work). None of the committee posts had more than one candidate so the following members were elected unopposed:

Chairman - Mick Sutton  
Secretary - Robert Williams  
Committee Member - Chris Emmins  
Committee Member - Elliott Bird

The member who had agreed to stand as treasurer did not attend the meeting and had not offered an apology or explanation. In his absence none of the other members present were willing to stand for the role so Mick Sutton agreed to continue as Chairman and Treasurer.

Throughout the meeting many useful points and suggestions were raised including how to make meetings more welcoming to new members and ideas for local advertising. Since the AGM the new committee has implemented some changes to the layout of the meeting room that we hope will make it more welcoming. We are also planning some changes to meeting structure once the quiet summer holiday period is over.

## Club Amigas

SEAL has purchased an A4000 desktop club machine for use by members at meetings. This started life as a basic '030 machine with a Picasso II, over the last few months we have upgraded it with a Commodore A3640 '040 accelerator which was donated to the club by Elliott Bird and a Picasso IV, another donation. These are two of several equipment donations which have been made to SEAL over the last few months, in the near future we will be making this equipment available to members of the club for a small donation to funds, some of the larger items may be raffled.

## Meetings

As usual we have been holding our regular meetings every other Friday, meeting topics have included a Scala tutorial by Elliott Bird and an OS3.9 demonstration by Robert Williams. When there is not an organised topic we have a Workshop meeting where members bring along their Amigas to get help with problems or to show off their system and software. This often leads to informal demos, in the last few weeks we have seen IFusion, Shogo, Photogenics 5 and many more products demonstrated in this way.

## Website

The policy of updating the website after every meeting has been well received and we have followed it pretty strictly, in fact the site is often updated between meetings too. Recently we have added a new Gallery section, the idea of this is to show member's Amiga related work including images, websites and programs. So far Roy Burton, Gary Storm and Robert Williams are featured and we hope more members will submit work they are proud of for inclusion soon.

## Amiga Acrive

Issue 22 (July 2001) of Amiga Active, has an excellent four page feature on Amiga usergroups. It describes the many ways usergroups contribute to the Amiga community and the reasons people might want to join their local group or even start a new one. The article includes quotes from SEAL's chairman Mick Sutton, a paragraph or two on this very magazine and SEAL's contact details. Also included are a photo of our stand at the alt.WoA show and a screengrab of this website. As if this wasn't enough later in the mag you'll find a Shogo review written by SEAL member and publicity guy Gary Storm. Thanks to Amiga Active for the excellent coverage!

## Want to know more?

Members and non-members alike are very welcome to visit the SEAL website where you can find up to date meeting reports and news of all the latest happenings, surf to: [www.seal-amiga.co.uk](http://www.seal-amiga.co.uk).

# Kickstart 4

Now in its fourth year the Kickstart show has become a regular event in the UK Amiga calendar. This year's show was held on Saturday the 26th of May in a new venue at Banstead, Surrey, just off the M25. The new venue was much bigger than previous years with a spacious entrance lobby, a large hall for commercial exhibitors and smaller rooms for the games competition and usergroups.

Kickstart had a table in the lobby where they were attracting new members, also on this table was a very large (21") monitor which was showing various programs during the day including Mac Emulation and Scala. In the main hall Eyetech had the biggest stand complete with the Amiga One board mounted in one of their Z4 towers populated with PCI cards. Although the A1 was not running it was interesting to see it in the flesh after looking at so many photos on the 'net. Going round the hall Weird Science had a huge number of CDs at knock-down prices, Amiga Active were selling mags and taking subscriptions, Blittersoft had some hardware and software including IFusion on sale, Forematt Home Computing had their range of utilities and games as well as 100% Amiga magazine, Analogic had a selection of hardware and last but not least KickStart's own KickSoft were selling their range of registered shareware.

In addition to the Amiga vendors there were also two generic suppliers one with a huge range of paper, ink and other printer supplies and the other with generic hardware including scanners and printers. On a slightly negative note I was disappointed to see that apart from the Kicksoft stand (where Ray McCarthy was doing his usual excellent demos and sales pitch) none of the other exhibitors had a single Amiga running to demo hardware or software.

The usergroups were housed in a small but airy room with big windows along one wall, in addition to SEAL



Eyetech's AmigaOne 1200 Prototype.



Gloucestershire Amiga Group, Amiga Support Association and Amigroups UK had tables along with a couple of individuals. Most groups were selling second hand gear and handing out advice and they all had machines demonstrating various software. Of particular interest were two Mediator machines on the GAG stand where you could get help and advice on installing and using this exciting new product. Paul Qureshi on the AmigroupsUK stand brought along the A1200 based in-car MP3 player he is building complete with dashboard LCD display which was very impressive.

On the SEAL table in the usergroup area we were selling Clubbed magazine. Even though we didn't have a new issue for this show sales went well, this was largely thanks to Haydn and Chris Emmins who manned the stand for most of the day while Mick Sutton and I were busy in the games area.

On the big screen in the games area was the ever popular Sensible Soccer tournament organised by the Blackpool Amiga Group who had also brought along several machines which were running other games, I noticed Quake and I think Napalm amongst others. Mick Sutton and I ran the Shogo tournament on our machines which went really well apart from a few crashes. Everyone seemed to be impressed with the look and speed of the game. The final winner of Shogo was Paul Qureshi who won a hard drive from Analogic and a years subscription to our Clubbed magazine.

Altogether we enjoyed the show and thought the venue was a great improvement over previous years, sadly I think that the attendance was lower than the organisers hoped. This was probably mainly due to the excellent bank holiday weather and possibly to the current market position where new products like the Amiga One have already been announced and extensively previewed on the 'net but are not actually out yet. Anyway thanks to everyone involved at Kickstart for all the effort they put into the show.

# Alt.WoA

Amazingly there hasn't been an Amiga show in the north of England for many years (maybe there has never been one), Huddersfield Amiga User Group decided to change this by holding a show in their native Huddersfield on the 25th of February.

The venue for the show was the night club below a large pub just off the M62, very easy to get to even for us soft southerners. Although a night club seems an odd venue (and this one had all the accoutrements such as black walls, mirrors, lasers and even bubble tubes with floating fish!) it proved excellent with enough room for the exhibitors while still feeling friendly and cosy. The games arena was located in the "chill out" zone so there were plenty of cushions to sit on while you waited to play Sensible soccer (organised by the guys from Blackpool I think) or Heretic II which we organised.

The main sponsor of the Event was Eyetech who had a large stand in the centre of the main hall, other retailers included Forematt Home Computing, Kicksoft and Weird Science. User organisations were strongly represented, I remember Kickstart, SEAL, Amibench and Trogsoft and I'm sure there were a couple of others I've forgotten (sorry guys). The attendance was rounded off by and Internet cafe run by Wirenet and a stand selling printer supplies.



Fleecy at the SEAL stand.



John of Forematt Home Computing looks like he's having a good time!

In addition to these attractions Fleecy Moss was there and seemed very impressed with the show. Eyetech brought along pictures of the Amiga One motherboard and held a presentation at the end of the show on the current status of the new machine. During the show representatives of the user groups gathered for the first meeting of Amigroups UK, a new UK Amiga usergroup organisation which began as a mailing list organised by Paul Qureshi of ASA. The meeting mainly consisted of introductions and brainstorming for ideas to help usergroups help each other. These discussions have continued ever since on the mailing list.

From a SEAL point of view we had a fantastic day of magazine sales, issue 7 was fresh out at the show and sold like hot cakes and we also did a good trade with the few back issues we had in stock (we could have sold many more). Because we were meeting lots of people for the first time we sold lots of subscriptions as well as single issues. Thanks to SEAL members Elliott Bird, Paul Mountsey and Dave Kennedy for manning our busy stand during the show and helping out with the games arena.

Overall everyone we've spoken feels this was a great show, the excellent venue gave the show a very friendly feeling and having a bar so close by was also a boon (except for those of us who had to drive :)). Perhaps because this was the first show for so long in the area all the visitors seemed really keen and positive and by all accounts the retailers did very nicely. Hearty congratulations to the HAUG guys who handled their first show like old pros!



## Boing is Back

Amiga have released an update to AmigaOS 3.9, in the form of Boing Bag 1. In addition to some minor updates and bug fixes BB1 includes a Reaction GUI for Genesis prefs and the long awaited ASyncWb utility. The latter adds asynchronous copying and deleting to Workbench, now you don't have to wait for these file operations to complete before you do something else with Workbench, most excellent!

Download the update now from:  
[www.amiga.com/3.9](http://www.amiga.com/3.9)

## iFusion Released

After a very long wait Microcode Solution's Power Mac emulator, iFusion, has been released. Sadly due to a problem with WarpUp iFusion only works on Amigas with a CyberStormPPC card and not the more popular BlizzardPPC cards for the A1200 at the moment. According to Blittersoft, Microcode's distributor, there is nothing they can do about the problem until Haage and Partner can modify WarpUp, which is being worked on.

On those machines where it does work iFusion seems to be a bit of a mixed bag (speaking as a user with an CyberStorm in my A3000) the core emulation seems to work well and is compatible with most Power Mac programs. However iFusion does lack many useful features, there is no serial port, parallel port or networking support so surfing the net and printing are out. Also the current release of iFusion does not have accelerated graphics drivers so the screen redraw can be slow, this makes the emulation seem slower than it really is.

Development is continuing, some initial problems have been fixed and one major feature, sound support, has been added so there is hope, upgrades are available from the Blittersoft website. Whether the WarpUp problem can be sorted remains to be seen.

iFusion is available from Blittersoft at £149.95 and also requires MacOS 8.6 or above (it won't run OS X). The Blittersoft website at [www.blittersoft.com](http://www.blittersoft.com) has on-line ordering or you can phone them on +44 (0) 870 7462118.

## Hyperion News

As we have reported in previous issues Hyperion have been busy porting a number of top games for high end Amiga gamers. Their first game, Heretic II, was very well received and now their second is out...

### Shogo

Shogo is a manga themed first person perspective 3D shooter. Shogo's action is tied together by a story line that allows you to fight both on foot and in giant mechanical robots. This gives a lot of variety in locations and game play, for example you might be outside in a city or desert in your Mech or inside a building on foot. The two modes also have different weapons, yet more variety. Shogo requires a PPC system but seems to run a little faster than Heretic II overall.

### SiN to be AmigaOne Only

Hyperion have decided that SiN, a Police themed 3D shooter set in the future, that was to be released soon will now be held back until the Amiga One is released as it needs too much power to play well on existing Amiga PPC systems. Although it is based on the same Quake II engine as Heretic II other aspects of the game make it more demanding. According to Steffan Hauser, one of Hyperion's developers, "Sin has really heavy AI Code... this is the problem".

### Descent: Freespace The Great War

This "space combat simulator" is likely to be Hyperion's next release, it is set to have the lowest requirements of all their

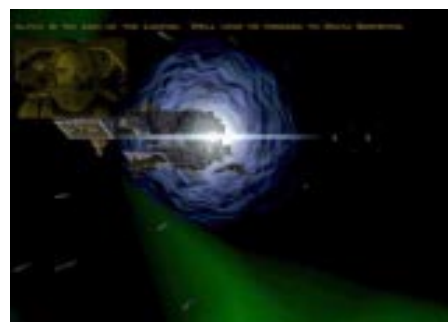


releases so far, even a 68K version is on the cards (no promises at this stage) although that would need a 3D graphics card. The game features advanced physics and breathtaking 3D effects including deadly asteroid fields and massive capital ships. The missions form a detailed campaign where your performance makes a difference to the game's progression. Both the enemies and your wing men are controlled by sophisticated artificial intelligence which adapts to your abilities. Sounds like a blast!

for more information visit Hyperion's website at:

[www.hyperion-software.com](http://www.hyperion-software.com)

Their games can be purchased from your friendly Amiga dealer.



## Kicksoft Gives You More (and gets Clubbed!)

Since our last issue Kicksoft have greatly extended their range of pre-registered shareware and commercial Amiga software. They can now supply products such as Photogenics, Art Effect, Pagestream and many more, some of which have been difficult to source in the UK, you can even buy your Clubbed subscription through Kicksoft! As we go to press Kicksoft have just unveiled their brand new website which has on-line ordering in US dollars, sterling, French Francs, Deutsch Marks and Euros on a wide range of credit and

debit cards. Facilities are also available for people who would rather order over the phone or pay by cheque.

If you can't find what you want listed on the Kicksoft website or in their advert in this issue, contact Kicksoft via EMail or give them a ring. They can often order a product for you and are always adding new products to their range.

You can find the Kicksoft website at [www.kicksoft.co.uk](http://www.kicksoft.co.uk) or phone them on +44 (0) 1737 219280.

## BPlan Pegasos Prototypes

Just before Christmas last year German company BPlan announced their intention to build a new PowerPC based motherboard codenamed Pegasos. BPlan state that they see two main markets for the machines based on the motherboard, LinuxPPC and Amiga users. BPlan are working with the MorphOS team to get their PowerPC Amiga compatible OS working on the Pegasos in fact some of the MorphOS team also work for BPlan. We also know that there have been some discussions between Amiga and BPlan although no results have yet been announced. The initial specifications for the Pegasos are:

- Micro ATX Motherboard
- 133Mhz Processor slot and 133Mhz SDRAM
- AGP slot
- 3 PCI slots
- USB and Firewire
- 10/100 MB/s Ethernet
- 100Mb/s UDMA IDE controller
- PS/2 mouse and keyboard, serial and parallel ports
- The board will support one or two



PowerPC G3 or G4 processors, the highest currently available speed is 733Mhz.

In April BPlan posted the first images of a prototype Pegasos with LinuxPPC running. Ralph Schmidt, the lead programmer of MorphOS, has said that the work on the Pegasos version of their OS is progressing but they won't show it at Amiga events until it is completed to their satisfaction.

[www.bplan-gmbh.de](http://www.bplan-gmbh.de)

[www.morphos.de](http://www.morphos.de)

## Repulse is Spreading

After several delays Alien Design's Repulse sound card is now available and pre-orders have been shipped. The Repulse is a high quality Zorro II card for any Amiga with Zorro slots (A2/3/4000 and A500/A1200 with Zorro II bus board). Some of its features include:

- Sampling rates from 8 to 48 kHz including 44.1 kHz and 96 kHz S/P-DIF
- Support for 16 bit, 18 bit, 20 bit and 24 bit (S/P-DIF) samples in mono or stereo
- Enhanced full duplex recording
- 1x optical digital output (max 24 bit/ 96 kHz, S/P-DIF compatible)
- 1x optical digital input (max 24 bit/ 96 kHz, S/P-DIF compatible)
- 1x stereo line in (extern)
- 1x stereo line out (extern)
- 1x mono microphone in (extern)
- 1x independent stereo headphones out (extern)
- 3 internal stereo inputs to connect CD-ROMs etc.

Included software:

- AHI driver
- Toccata emulation
- Stream player to play encoded data via S/P-DIF output
- Stream extractor to extract encoded streams S/P-DIF input
- Full version of SoundFX!
- Driver for ProStation Audio of AudioLabs
- Many tools, shareware and demo versions on CD.

The Repulse costs about 200 Euros which is about £125 direct from Alien Design, currently I have been unable to find a UK distributor. For more details visit the Alien Design website: [www.aliendesign-gbr.de](http://www.aliendesign-gbr.de)

## Individual and Petsoff have Flipped!

The Petsoff Partnership have joined forces with Individual Computers (of Catweasel and Buddha fame) to produce a new version of Petsoff's Delfina DSP sound card. The new board known as the Delfina "Flipper Edition" has been partially redesigned to improve bus performance, it can now achieve over 5Mb/s transfer rate across the Zorro II bus. This enhanced performance allows more voices to be played at once and lower CPU usage per channel played than previous Delfinas (and other sound cards according to Petsoff's announcement). The Delfina's Digital Signal Processor is (as far as I'm aware) unique among Amiga sound cards and means it can perform special effects and even play MP3's with minimal load on the Amiga's CPU. The first new boards should be available this summer and will cost 189 Euros which is around £120.

The Petsoff and Individual Computers websites can be found at the following addresses:

[www.petsoff.com](http://www.petsoff.com)

[www.jschoenfeld.com](http://www.jschoenfeld.com)

*Petsoff's Delfina lite,  
one cool looking Zorro card!*



## Open YAM

YAM (Yet Another Mailer) is probably the most popular Amiga EMail program, largely due to its freeware status and powerful set of features. YAM's author recently made it open source so it could be developed by any member of the Amiga community and soon a team formed to continue development. The first fruit of their work is now available in the form of YAM 2.3. The new version includes new features, bug fixes and changes, many to make YAM use the latest MUI custom classes, there is also a MorphOS version available. The new features in this first open source release are fairly minor but much bigger things are promised for the future, keep your eye on the YAM website at:

[www.yam.ch](http://www.yam.ch)

**For more big news don't forget our news features starting on page 9!**



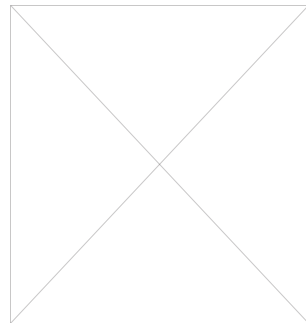
# DynAMlTe

Ever fancied blowing up your friends? Well now here's your chance with DynAMlTe, a freeware bomberman / dynablaster-clone which is designed to be played (in fact it can only be played) over a TCP/IP network which of course includes the Internet. Dynamite is programmed by the Author of the excellent Ami Trade Centre (the only FTP client with built-in Tetris) so it deserves a close look.

One of the features that is making the game popular on the 'net is that it can be customised, both new levels and styles (which give the characters a new

look), designed by players, can be downloaded from the Dynamite website. Anyway check it out for yourself at:

[amisource.de/dynamite](http://amisource.de/dynamite)

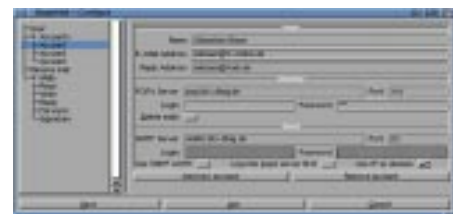
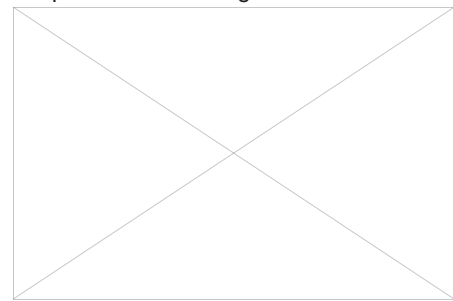


# E-Mail Made Simple

Simple Mail is a new open source EMail program with a MUI GUI, in many ways similar to YAM (which wasn't open source when the Simple Mail project started) however its programmers aim to implement features differently and add new ones. For example Simple Mail already has a threaded message view and hierarchical message folders not found in YAM. The threaded message view is a real boon as it makes reading mailing lists much more comfortable.

Simple Mail already has the basic features required to handle simple EMail and it is an on going project. New releases are made available regularly and each one has a slew of additional features. Download the latest version from:

[simplemail.sourceforge.net](http://simplemail.sourceforge.net)



# USB Central

Many Amiga users would love to be able to add USB ports to their machine, imagine access to the world of cheap USB hardware, from mice to scanners. As with many things this is not as simple as hooking up a USB controller to a Zorro slot or other likely port and plugging devices in. The USB ports themselves need a driver and on top of that each device needs a driver too, some devices like keyboards and mice are pretty generic but complex ones like scanners will need a driver for each model. Michael Böhmer has put together a very interesting web page that aims to collect information about efforts to bring USB to the Amiga. Surprisingly he even has pictures (shown below) of a USB interface which attaches to the A1200 clock port, so even though it has no drivers yet there is some progress being made, take a look at:

[www.e3b.de/usb/](http://www.e3b.de/usb/)



# More Payback

Since releasing their criminal themed overhead "drive-em up", Payback, Apex Designs haven't stopped enhancing the game, firstly several updates have been made available on their website to fix bugs and add new features. Next lots of new maps created by players are available which extend the game a great deal. Probably the most interesting development is that a PowerPC version utilising WarpUp is in the works, not only will this play more smoothly but it includes better quality shading and realistic lighting which, by the screenshots available, takes the game to a new level of graphical quality. The PPC version will be a free upgrade to existing owners so you got no excuse, buy this excellent game now, you can even do so on-line at Apex's website:

[www.apex-designs.net](http://www.apex-designs.net)



Three shots from the upcoming PPC Payback show the new subtle lighting and shadow effects.

# Amiga Update

Since our last issue Amiga Inc. have made some major announcements relating to both the Amiga DE (Digital Environment) and the future of Amiga OS. From the point of view of existing Amiga users the most interesting announcement is probably that the AmigaOS will continue to be developed to version 4 and beyond. I don't think this means that the 50,000 copies of OS3.9 were sold which Fleecy Moss originally suggested was a requirement for OS 4, instead the strategy has been reworked so a radically enhanced OS 4.x and 5 running on new hardware complement the Amiga DE.

Amiga have now issued a clear plan for OS 4 development, here is a summary of the key features for each release:

## AmigaOS 4.0

Version 4.0 is the first step to a PowerPC native AmigaOS that takes full advantage of Zico (Amiga's specification for future "Amiga" computers) compliant computers. In this release key aspects of the OS will be ported to PPC and the remaining 68k code will run under emulation, no 68k processor will be required. Even with version 4.0 new features will be added that have never been available in the AmigaOS.

- PPC native Exec (OS kernel) allowing for the following execution of PPC, 68k and mixed (PPC+68k) executables.
  - A PPC 68k emulator.
  - Virtual Memory System for new applications and games.
  - Graphics system with support for modern graphics cards, Voodoo3 and Matrox G450 drivers included in this release.
  - Audio system with integrated AHL and CAMD (for MIDI) support.
  - PPC native reimplementations of FFS with higher performance and reliability.
  - New TCP/IP stack optimised for PPC, multiplayer gaming and content serving.
- We understand that initially OS4.0 will support only the Eyetech AmigaOne and an A1200 will be required. Presumably other hardware such as Elbox and Matay will be supported as development continues.

## AmigaOS 4.2

4.2 will continue the work started in 4.0 with more of the OS code running natively on PPC, it will also allow all applications to run without an older Amiga attached. More of the features of Zico specification hardware will be supported. Release 4.2 will also see the integration of the Amiga Digital Environment into AmigaOS.

- AmigaDE hosted directly in the AmigaOS
- Personal Java
- SHEEP scripting language
- Audio System made PPC native with drivers for EMU10K1 PCI cards.
- USB2.0 support with drivers for mouse, keyboard and hub.
- Amiga.devices reimplemented as retargetable, removing the requirement for old Amiga hardware to be present

## AmigaOS 4.5

AmigaOS4.5 represents the final stage in the creation of a native PPC OS. Its tasks include:

- All remaining 68k OS code to be converted to PPC native.
- All hardware features of the zico spec. made accessible to developers.
- New user environment.

## AmigaOS 5

AmigaOS5 represents a revolution in the development of 'other' operating systems and the evolution of the AmigaOS as it seeks to provide the best way forwards for users and developers. Its feature set includes:

- Brand new services model providing
- Virtual Memory
- Memory Protection
- Symmetric and Asymmetric modes
- AmigaOS4 sandbox
- and many more advanced features.

You might ask how this fits in with Amiga's plans for the DE? It seems that plans for OS 4 and beyond came about because extending the DE to a full desktop operating system was found to be incompatible with other key target platforms such as PDAs (Personal Digital Assistants) and other portable devices. For example a modern desktop OS needs features like memory protection and virtual memory which are not part of Amiga DE and adding them would be over kill on a mobile phone. Therefore Amiga's aim is to make a computer running AmigaOS 4 and above the home server which stores digital content such as video and music for access by other devices running AmigaDE. This computer can also be a "powerful computer in its own right". From version 4.2 AmigaOS will have Amiga DE integrated so it can run all software and "content" developed for the DE, another benefit will be access to Tao's Personal Java, giving compatibility that AmigaOS has lacked for a long time.

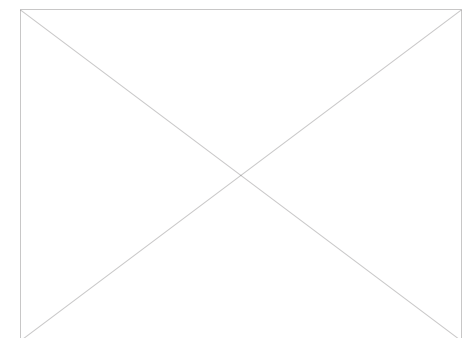
For full details of the new Amiga strategy

## Loads to report from Amiga this issue, Robert Williams gets stuck in!

take a look at the extensive Technical Update linked from Bill McEwan's 12th of April update at: [www.amiga.com](http://www.amiga.com)

## Amiga One

As we mentioned above the AmigaOne from Eyetech is scheduled to be the first machine running AmigaOS 4.0. Since our last issue development of the A1200 version has continued apace, prototype boards have been shown at several Amiga shows in the US and the UK but so far no machines have actually been seen running. According to the latest update on the AmigaOne website OS4.0 shipped with the Amiga one will support 1GB of main memory, UDMA IDE and SCSI controllers, Ethernet cards 2D drivers for Voodoo3 PCI/AGP and Matrox G450 PCI/AGP & G550 AGP graphics cards. Warp3D/Mesa 3D drivers will also be shipped with the first release of OS4.0. Sound card (with Paula emulation), USB (keyboard and mouse) drivers will follow as downloadable updates so we won't have to wait until OS4.2 for those facilities. Eyetech now expect the AmigaOne and OS4.0 to be shipping to customers in the first week of



October this year.

For full details visit the AmigaOne section of the Eyetech website at [www.eyetech.co.uk/amigaone](http://www.eyetech.co.uk/amigaone).

## Sharp

Amiga have announced their first "house hold name" partner, consumer electronics giant Sharp. Amiga will be providing AmigaDE based "content" (that is ap-





plications, utilities and games to you and me) for Sharp's new range of Zaurus PDAs which have just been launched in Japan. These hand held machines run the Linux operating system so we assume AmigaDE will be running in its hosted mode. Sharp has already displayed machines running AmigaDE applications at several fairs in the far east and plans the

launch the Zaurus in the US and Europe in the coming months.

### Amiga, Elbox and Matay

In addition to their new big name partner Amiga have come to agreement with two Amiga companies, Elbox Computer and the Matay Company both based in Poland. Both companies plan to market a

PowerPC add-on card for their PCI solutions, in Elbox's case the Mediator and Shark PPC and in Matay's the Prometheus and an as yet un-named PPC card. These agreements should lead to OS4.x and beyond being available on the company's hardware giving an upgrade path to existing Amiga users. Both Matay and Elbox have stated that their PPC hardware will

# Readers Wives

## The Awakening

By Sue Emmins



Never in my wildest dreams would I have envisaged being enthralled by an Amiga. My first encounter with the Amiga was back in the distant past. My youngest son Lee was amazed by the A500s capabilities, stereo sound and neat graphics. Although failing in his attempt to enlighten me, it didn't stop him trying.

His whole life seemed to revolve around computers. spending most of his waking hours in his room with the latest games and applications. Even writing a game in Amos. He was truly hooked. So much so that I became worried when he and his friends would rarely venture into the outside world, unless it was Amiga related. I was astonished when I heard that the Amiga was to accompany one of his pals on holiday.

Little did I realise all that was about to change. Chris came into my life, along with not one, but two Amigas an A1200 and an A1500. Was this a conspiracy I asked myself. He and Lee would talk about the Amiga for hours. As time passed I became curious, what exactly was the fatal attraction they could not resist.

Gradually, very gradually I began to play the occasional game on Chris's Amiga. Volfied, Shanghai and Solitaire

## Is Robert a budding Hugh Hefner, you decide!

became my favourites. Light hearted fun, quite entertaining I thought, but music was still my passion.

It was around this time I purchased my first Amiga an A600. Well it wasn't a waste. I thought my Daughters could also share in the enjoyment. narrow minded I now know it was, I regarded it as a games machine. Sorry folks! approximately twelve months later an A1200 had taken its place, enabling us to play even more games. At this point the Amiga still didn't do it for me.

With the girls now growing up I began to think the internet would be a worthwhile investment as an aid to their education. So I thought about a PC, but soon realised I could achieve this with my Amiga. So why get a PC.

Chris was only too pleased to tower up my Amiga. equipped with an A1200 1d4 motherboard in a Superwuz tower, Apollo 040/33, 10gig Quantum fireball hard drive, 24X cd rom drive, Power flyer, OS3.9, it was now ready for the net. My eyes were beginning to open, not bad I thought. The revelation was yet to dawn upon me. I could download MP3s. All the music one could imagine at my fingertips. My beautiful machine, my Amiga.

By the way the Girls have their own towered Amigas.

Converts X 3.

## Amiga Widows

By Sharon Sutton

The word Amiga and everything amiga related, enters into my everyday lifestyle. I describe myself as an amiga widow! The amiga lifestyle covers anything amiga-related. An experienced amiga widow must be loyal to the amiga community and be prepared to tackle anything amiga-related.

Your responsibilities may include anything from picking up numerous amiga magazines scattered all over the house, putting them in a neat pile (and not forgetting date order!) where they can be easily accessible for quick reference. The occasional international telephone call to an amiga retailer may be asked of you, usually you will not need your bilingual skills for this task, but the motto is "always be prepared".

Once a month you will receive an urgent call from your loved one, usually on your mobile, when you are in the supermarket asking you to try and get the latest amiga magazine, this request needs to be dealt with in a calm manner even though you are trying to guide the trolley around the supermarket with the kids screaming and clinging onto you like limpets and whining for sweets! but with experience you should know exactly which day the latest amiga magazine comes out, so you just answer with "OK love" hang up and make a dash to all the newsagents in your area!

As all amiga widows know, amiga fanatics may sometimes lose all sense of financial reality, with careful handling this need not be a problem. We all know that amigans have to indulge themselves in the latest software/hardware, we need to take into account the money involved, are we talking about debit or credit? Credit involves big big money believe me I know! Are you prepared to delay your holiday etc. However, sometimes we need to show compassion and agree to their purchase, believe me ladies it can be worthwhile!!

We also need to be good listeners, this skill is usually needed at mealtimes. The amigan will tell you all about the latest amiga news, software/hardware, all the latest amiga gossip, and not forgetting all the latest software updates, remember ladies credit or debit! You will need all your concentration skills, look interested and try to be enthusiastic, ask questions but not too many as you could be sitting at the table for hours!

You may be required to do a spot of globe-trotting to various amiga shows, this actually translates to a venue in London etc. When accompanying your Amigan walk around the show with a keen interest even though you have walked around the hall twenty times! As with all Amigans keep a tight rein on the plastic as they can get very excited with all those goodies laid out in front of them!

Amigans will scale the internet for hours on end looking for amiga parts that they need for their beloved amigas, once they have located what they need this could mean a local trip or a trip to Scotland! You could find yourself on your own for hours on end while your beloved makes his trip, to cheer yourself up while waiting for your cherished one to return, make the most of this time and go shopping with his credit card.

Part of being an amiga widow is to play host to other amigans! Always be prepared to serve tea and coffee, and to know the latest amiga gossip so you can join in the conversation. These evenings tend to go on into the early hours, on these occasions its a good idea to take a trip to the video shop, or go to bed early with a good book.

Being an amiga widow is an excellent vocation! There are many benefits which include using your communication skills, travel, entertaining, being diplomatic, and juggling the accounts.

What are you waiting for ladies sign up today and be an amiga widow!





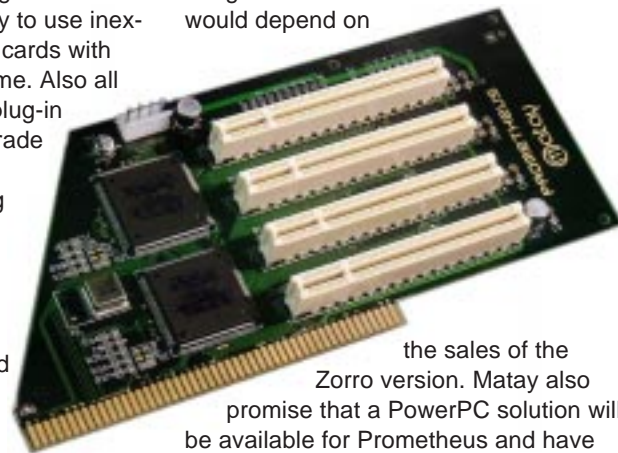
# PCI Update

One area of the Amiga marketplace has been really active since our last issue, that is PCI expansion boards. Last time Elbox had released the Mediator 1200 with a model for A4000 tower conversions on the cards and DCE said the GReX 1200 was imminent. Now another company has entered the fray and both Elbox and DCE have announced new boards to suit other Amiga models. All this activity shows that Amiga users have been looking for a way to use inexpensive generic expansion cards with their machines for a long time. Also all the PCI boards promise a plug-in PPC module giving an upgrade path that will hopefully be cheaper and less restricting than the current exPhase 5 PPC accelerators.

## Prometheus

Matay are a recently formed Amiga dealer who were hardly known outside their native Poland until they announced their first hardware product, the Prometheus. Prometheus is a Zorro III card so it will plug into any Amiga with Zorro III slots, these include the A4000(T), A3000(T) and A1200s with a Zorro III busboard and fast slot accelerator (required to activate ZIII mode). The design of the Prometheus

places the PCI slots at ninety degrees to the Zorro slots meaning that desktop machines will almost certainly need modifications to their case to fit the board populated with PCI cards. Tower Amigas should fare better but some Zorro slots may still be blocked. In a recent interview with [www.amigafuture.de](http://www.amigafuture.de) Filip Dab-Mirowski of Matay stated that they may consider a model that replaces the A4000's Zorro daughter board but this would depend on



the sales of the Zorro version. Matay also promise that a PowerPC solution will be available for Prometheus and have an agreement with Amiga so hopefully OS4.x will be available.

Looking at the pictures on the Matay website and reading comments on the Internet it seems that the Prometheus is a high quality product, it is supplied with mounting brackets to hold the PCI cards firmly, extension cables so connections can reach the back of the case and a CD of drivers all packaged in a colour printed box (something of a rarity these days). Despite being rather an unknown quantity Matay have found favour with many Amigans by shipping the Prometheus barely a month after it was announced, complete with a complement of officially licensed drivers including Picasso 96 and Warp3D drivers for the Voodoo 3 and an NE2000 network card driver which is compatible with many common (and therefore cheap) 10MB/s Ethernet cards. They also include a freely distributable, royalty free software development kit (which can also be downloaded from their website) so anyone can write drivers for PCI cards attached to the Prometheus. Drivers for a sound card and TV card are in development and should be released soon. Perhaps it says some-

## Wow, there are now 7 different PCI boards from 3 manufacturers!

### By Robert Williams

thing about Matay that the Prometheus was the last card to be announced but the first to have a Voodoo3 Warp3D driver.

Prometheus is available from Blittersoft and Eyetech in the UK at £199.95.

## GReX

DCE shipped the GReX 1200 in March, it connects to the Blizzard PPC's expansion connector and can only be used with a towered A1200. The driver package includes CyberGraphX version 3 drivers for the 3Dfx Voodoo 2000, 3000, 4000 and 5000 series graphics cards and a SANA II driver for Ethernet cards based on the popular RealTek 8029 chipset. Enhanced graphics card drivers are available with the commercial CyberGraphX 4, if you already own version 4 the new drivers can be downloaded from [www.vgr.com/g-rex](http://www.vgr.com/g-rex). Since that release DCE have announced two major new PCI related products, the first is the GReX A4000. This is a busboard for A4000 desktop users with a CyberStormPPC or MkIII accelerator, like the A1200 version it connects to the expansion slot on these accelerators. The GReX 4000 replaces the A4000's daughterboard, it has four PCI slots, three (in-line) Zorro slots and one video slot. As far as I am aware the GReX 4000 has not shipped yet, I assume that when it does it will include the same driver bundle as the A1200 version. However DCE do state that TV card, sound card, USB and more network card drivers are coming soon, they have shown a screen grab of their TV card driver development on



The GReX 4000 looks neat but you need a CyberStorm PPC or MkIII accelerator.

[www.vgr.com/cybergfx](http://www.vgr.com/cybergfx).

The second DCE announcement is of their PPC accelerator aimed at PCI bus boards. This is called the DCE Microserver G3/G4. It is a PCI card with a PowerPC G3 or G4 processor running at between 450 and 733Mhz along with up to 1Gb of 133Mhz SDRAM, 100Mb/s Ethernet and optional Firewire ports. The idea behind this card is that it can be used as an Amiga accelerator in a PCI bus board or as the central processing unit of a stand-alone PowerPC computer if it is plugged into a dumb PCI backplane. According to their April press release DCE expect to have the Microserver ready before the end of this year.

The GReX 1200 is available in the UK from Power Computing at £149.95.

## Mediator

Elbox, who were the first company to get a PCI board into the hands of Amiga users in the form of the Mediator 1200, have not been standing still over the last few months. They have released several updates to the Mediator's driver package, in particular their 3Dfx Voodoo graphics card driver has been gradually enhanced and now support most models in the range from the Banshee up to the 5000 series. In addition to the network card driver already supplied Elbox have



[www.amiga-mediator.co.uk](http://www.amiga-mediator.co.uk) is an excellent Mediator resource on the web.

added their own Picasso 96 S3 Virge driver so Mediator users have access to these cheaper PCI cards too. As far as we are aware there has been no change in the licencing position, Elbox develops its own drivers which use Picasso 96 without the permission of the P96 team. As we reported last issue Elbox have released the Mediator PCI 4000 bus board for towered A4000Ds which has 5 PCI slots and the facility to add a Mediator PCI logic module which will activate the PCI slots however the Mediator logic had still not been released as we go to press.

Elbox have announced two new Mediator models meaning there will be one for all the most popular "serious" Amiga models. The Mediator PCI ZIII is a Zorro III card with four PCI slots, it is suitable for the A3000(T), A4000(T), and A1200s with Zorro III busboards (and the required fast slot accelerator to activate them). Like the Prometheus fitting of the Mediator ZIII will depend on your configuration and may block some Zorro slots. The second model is the Mediator ZIV which attaches to one of the ZIV slots on the popular A1200 ZIV bus board, this combination will give A1200 owners Zorro slots for their existing cards along with four PCI slots. Photos of these new Mediators and the logic card for the Mediator PCI 4000 have been released on the Elbox website and the press release says they were scheduled for June so hopefully they will be available by the time you read this.

There are now quite a number of Mediator owners out on the Internet, Sam Thomas has started a mailing list called Amiga-Mediator on Yahoo Groups ([www.yahogroups.com](http://www.yahogroups.com)) where users can get help and discuss Mediator related (some of the time anyway) issues. Sam has also started a Mediator support website which looks fantastic and has great content, it is at [www.amiga-mediator.co.uk](http://www.amiga-mediator.co.uk), essential if you have a Mediator. Richard Brooklyn

has released Medication, a utility which brings the settings for graphics cards plugged into the Mediator and Picasso96 settings into one place using a MUI interface. As drivers for other types of card are released Richard plans to add their controls to Medication making it a universal Mediator utility.

## Mediator Pricing

Power Computing, Elbox's distributor in the UK currently has the following prices for Mediator hardware:

Mediator 1200 £139.95  
Mediator 4000 £149.95  
Mediator ZIII £149.95  
Mediator ZIV £169.95

## Warp3D Drivers

For some time Hyperion (the people behind ports of the fine 3D games Heretic II and Shogo) have been developing 3D drivers for the Voodoo 3 2/3000 graphics cards (note that while 2D drivers are available for other Voodoo models Hyperion have stated that only the 2/3000 will be supported by 3D drivers for the foreseeable future) which are supported by all three PCI bus board manufacturers. These 3D drivers are for the Warp3D system developed by Sam Jordan of Haage and Partner with Hyperion. Hyperion use Warp3D in their games so once drivers are available they should instantly work on the Voodoo. In a recent press release Hyperion announced that the Voodoo 3 drivers will only be available to hardware manufacturers who obtain a license to use them with their PCI product. The reasoning behind this decision was two fold, firstly Hyperion's drivers will be included in Amiga OS 4 for which a license fee will have to be paid, it would be unfair to effectively sell the drivers to people with OS 4 while continuing to give them away to others. Secondly Hyperion say the development of the Voodoo drivers is significantly more complex than those for the Permedia 2 based B/CVisionPPC cards. Drivers for other more advanced 3D cards will be even more time consuming, therefore they are "far beyond the scope of a freeware project".

So far Matay and DCE have signed up with Hyperion and as I have mentioned Warp3D drivers for the Voodoo 3 are supplied with Matay's Prometheus board. As I write this Elbox have not come to an agreement but hopefully they will get on board as 3D drivers must be a big selling point for those

## Contacts

### Hardware Developers

#### DCE

[www.dcecom.de](http://www.dcecom.de)

#### Elbox

[www.elbox.com](http://www.elbox.com)

#### Matay

[www.matay.pl](http://www.matay.pl)

### Dealers

#### Blittersoft

[www.blittersoft.com](http://www.blittersoft.com)  
+44 (0) 870 7462118

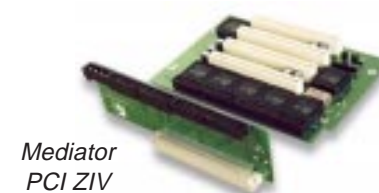
#### Eyetech

[www.eyetech.co.uk](http://www.eyetech.co.uk)  
+44 (0) 1642 713185

#### Power Computing

[www.powerc.com](http://www.powerc.com)  
+44 (0) 1234 851500

## New Mediators



Mediator PCI ZIV



Mediator PCI ZIII



Mediator PCI 4000



# Networking

## Explained

Getting computers to communicate can be tough but the results are worth it. Robert Williams gets stuck in.

**M**any people now have several computers, some have a collection of Amigas and others a mixed bag of different platforms. If you have more than one machine it is useful to be able to move information between them, for small amounts of data or occasional use swapping floppies, ZIP disks or CD-RWs is probably fine. If you want to move information around on a regular basis a network makes life much easier and some types of network also offer the possibility of sharing other resources such as an internet connection or printers between machines as well as simply files.

Most networks consist of three discreet parts (I'm simplifying here but the three elements I describe are the ones a user has to think about), the hardware which physically links the computers together, the networking software which allows them to communicate and application software which actually uses the network connection. On many simpler networks the networking software is also the application software, it establishes communication and includes various services such as file transfer. More complex networks use networking software such as a TCP/IP stack to enable communication then separate application software like a web browser or FTP client uses this connection to send and receive data across the network. In this feature I will look at each of these elements in turn.

## Hardware

### Serial

Probably the lowest cost and simplest way to connect two computers is via their serial ports, the vast majority of computers have a serial port complying to the RS232 standard and therefore can be connected in this way. To make this connection you need a null modem serial cable which is a standard cable available at most computer shops and suppliers such as Maplin Electronics.

Note that a null modem cable is not the same as the cable used to connect a modem or other serial equipment. Amigas have a 25 pin "D" serial port where as most recent PCs (and some other machines) have a 9 pin "D" port both these ports have the same connections so all you need is a null modem cable with the appropriate connectors, you can also buy adaptors from a 25 to a 9 pin port and vice versa. Two types of null modem cable are available, three wire and seven wire, the advantage of a seven wire cable is that you can use hardware flow control (also called RTS/CTS flow control). With a three wire cable (send, receive and ground) codes (called Xon/Xoff) within the data stream are used by each machine to tell the other when it has data to send and when it is ready to receive data. A seven wire cable has Ready to Send and Clear to Send lines allowing the flow of data to be controlled through hardware which improves performance and reliability. The maximum length for a good quality seven wire null modem cable is about 15 meters, longer lengths may work but you are more likely to encounter errors as the length increases.

There are two main limitations to a serial connection, firstly it is a point to point connection, unless you have machines with multiple free serial ports you can only link two machines at a time. The second limitation is that serial transfers are slow, the maximum speed of the Amiga's internal serial port is 115200B/s (bits per second) which equates to about 14kb/s (kilo bytes per second) before any network overhead is taken into account, this is much slower than even a floppy disk drive, transferring a 1Mb file would take about 1.5 minutes over this connection.

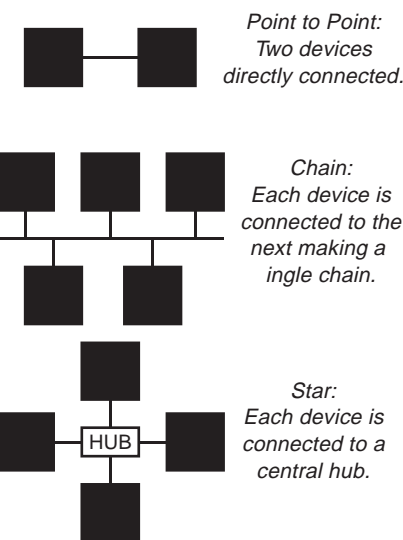
A serial connection is a cheap way to connect two computers of almost any type however it is only really suitable for small amounts of data or occasionally transferring large amounts when you're prepared to wait.

### Parallel

While the parallel port wasn't really designed with networking in mind (many early personal computers had a parallel port that could only send data) there are several systems available which allow you to link two Amigas or an Amiga and a PC using this port. All systems using the parallel port use a custom parallel cable such as a ParNET cable (this was originally designed for use with ParNET but is now also used by other parallel networking software such as ProNET) or a laplink cable (also called a "null printer" cable). Never connect the parallel ports of two computers using a straight through cable as this can cause damage, always ensure you are using a cable wired for parallel networking.

A parallel connection is usually considerably faster than a serial connection at about 40-60kb/s meaning our 1Mb file would transfer in around 20 seconds. Cable length is limited to about 5m, again you may be able to get away with a longer cable but you risk data corruption. As the parallel port is implemented differently on different computers and operating systems parallel networking is not as universal as serial, there tends to be a specific software and cable com-

## Network Topologies



bination required to link to your Amiga to each other platform.

If you have two machines which support parallel networking and are located close together then it is considerably faster than serial.

### Ethernet

Ethernet is the most common dedicated networking standard, you will find it in most companies, businesses, homes and schools connecting anything from two to thousands of computers. There are various types of Ethernet identified by their speed (in Megabits per second) and the type of cable used to connect the devices (usually computers but you can also connect some printers, cable/ADSL modems and various network devices directly to an Ethernet network) on the network. Each device is connected to the network, if the computer or device does not have an Ethernet port built in then a Network Interface Card (NIC) has to be added.

There are two common layouts (also called topologies) for an Ethernet network, a star or a chain. In a star topology each device is connected to a central hub, when one device sends a message the hub then broadcasts the message to all the connected devices, for this reason hubs are sometimes called repeaters or concentrators. With the chain topology each device is connected to another forming a daisy chain, as all the devices are connected to the same cable a message sent by one device is seen by all the others without the need for a hub. A chain topology is usually cheaper to set up because it does not require a hub and generally needs less cable however it has the disadvantage that disconnecting one device from the network breaks the chain and stops some devices accessing the rest of the network until the chain is restored. On a star network each device is independent of all the others and can be disconnected at will. In large networks a star based topology has even more advantages because it is easier to troubleshoot and expand but this is beyond the scope of this feature.

So let's take a look at the various types of Ethernet network available to the Amiga user, in this section I will only mention the most common types used in home and small business networking.

### 10BaseT

A 10BaseT Ethernet network runs at 10MB/s (just over 1 Megabyte per

second) using Unshielded Twisted Pair (UTP) cables and must use a star network topology if there are more than two network devices. UTP cables have eight wires arranged as four pairs twisted together which helps reduce interference, removing the need for any shielding. RJ45 connectors (similar to telephone connectors) are used to connect the UTP cable to each device. Two devices can be connected directly using a UTP cross over cable (the send and receive lines are crossed) but if more than two devices need to be connected then a hub must be used, devices are connected to the hub using patch cables which are connected straight through (not crossed). 10BaseT hubs start at around £20 for a unit with 4 UTP ports, much larger ones are available and hubs can be cascaded (by linking one to another) up to 4 deep. 10BaseT Ethernet networks are by far the most popular and you will find that suitable hardware is very readily and cheaply available, most current computers (be they PCs, Macs, Unix boxes etc.) come with at least a 10BaseT NIC built in, and if not PCI NICs are available very cheaply (from about £10).

### 10Base2

A 10Base2 network also runs at 10MB/s but uses 58 ohm coaxial cable (similar in construction to a TV aerial lead) which connects to each device using a BNC connector (this is a coaxial connector with a locking ring to prevent accidental disconnection). A 10Base2 network must use the chain topology with each machine connected to another. To do this each device has a "T" adaptor connected to its BNC connector and a cable to another machine on the chain is connected to each "arm" of the "T". On the device at the each end of the chain a 50ohm terminator must be connected to the empty leg of the "T" adaptor, these terminators are required even if there are only two machines on the network.

For the reasons set out in the section above 10Base2 networks are becoming less popular and 10BaseT (and faster systems based on the same type of cabling) now dominate the market. However many older Ethernet cards only have a BNC connector for 10Base2, if you would like to connect this type of card to a 10BaseT network many hubs are available with UTP ports and a BNC connector which can be used to hook up one or more devices with 10Base2 connections chained together.

### 100BaseT and 1000BaseT (GigaBit)

100BaseT and 1000BaseT (also referred to as Gigabit Ethernet) are faster Ethernet implementations which transfer data at 100MB/s and 1000MB/s respectively using UTP cables. To my knowledge no Ethernet cards supporting these standards have ever been released for the Amiga. While 10BaseT is still by far the most common standard 100BaseT is becoming more popular while 1000BaseT is still very rare outside server installations. Many Ethernet devices capable of 100MB/s operation also support 10MB/s and are commonly labelled 10/100, however if you connect a 10MB device to a 100MB network the whole network has to slow down to the speed of the slower device.

### Switches

One way to avoid slowing down a 100MB network when you add a 10MB device is to use a 10/100MB switch instead of a hub. A switch is similar to a hub in that network devices connect to it in a star topology but instead of broadcasting each packet of data to every device on the network a switch examines the packet and only sends it to the device it is intended for. This allows each device on the network to run at its maximum speed as it is effectively talking directly to one other device at a time. This is really only a side effect of a switch as its main purpose is to reduce network congestion and to allow all devices to run full duplex (they can send and receive at the same time) which also improves performance.

### You're NICed

Ethernet Network Interface cards have been made for almost every model of Amiga (yes, even the A500!), if you have a machine with Zorro slots quite a wide variety of Zorro II Ethernet cards have been available and one or two can still be found new (see table on the next page). As usual the Zorro cards tend to be fairly expensive this means that second hand prices have also remained quite high. If you're looking to buy second hand be aware that many older Zorro cards do not have a UTP connector so you'll need to make sure they can be integrated into your network.

A1200 and A600 users can get a PCMCIA Ethernet card, a freeware driver called cnet.device exists which supports a variety of cards which comply with the NE2000 standard, this means



## Common Amiga Ethernet Cards

Manufacturer	Model	UTP	BNC	AUI	Type	New?
Ameristar	A4066	Y	Y	Y	Zorro II	N
ASDG	EB920 (Lan Rover)	N	Y	N	Zorro II	N
Ateo	Ateonet 1/1+	Y	N	N	Ateobus	?
Ateo	Ateonet 3/3+	Y	Y	Y	Ateobus	?
Commodore	A2065	N	Y	Y	Zorro II	N
Hydra Systems	Hydra	O	O	O	Zorro II	N
Configurations available with different network ports fitted.						
Individual Computers	X-Surf	Y	Y	N	Zorro II	Y
Plus 2 clock ports, expansion port and 2 IDE (non-autoboot).						
National Amiga	APNET (NIMIQ)	Y	Y	N	PCMCIA	?
Power Computing	PowerLAN	Y	Y	N	PCMCIA	Y
RBM	IOBlix Ethernet Module	Y	Y	N	IOBlix ZII	?
Connects to rbm's IOBlix Zorro II I/O card.						
Village Tronic	Ariadne	Y	Y	N	Zorro II	N
Plus 2 parallel ports.						
Village Tronic	Ariadne II	Y	Y	N	Zorro II	Y
Connection: Y = Fitted as standard., O = Factory option., N = Not available.						
New?, is the card still available new: Y = Yes., N = No., ? = Unsure.						

you can buy a cheap generic PCMCIA NIC and use it with your Amiga. Several Amiga dealers sell a bundle of a compatible PCMCIA card and networking software. One thing to be aware of is that due to a bug in the A1200's PCMCIA implementation the NIC may need to be unplugged and re-inserted after each cold reboot to reset the card, this is a problem if your 1200 is in a tower! A motherboard modification to correct the problem is detailed in the cnet.device documentation, both Eyetech and Power Computing sell a small board which plugs over the Gayle chip and has the same effect but requires no soldering.

The recently released Mediator, GRex and Prometheus PCI bus boards provide drivers supporting generic PCI NICs based on the popular RealTek 8029 and other compatible chipsets. These can commonly be found at a small fraction of the price of a Zorro NIC, you just need to be sure to get a card based on this chipset. VGR.com (see the links boxout) have a list of specific brands which have been tested with the Mediator's driver.

### AUI

On many older Ethernet cards you will find a 15pin "D" connector with a spring clip, this is called an AUI connector (it stands for Attachment Unit Interface in case you're wondering) and was used to

connect to older "thick Ethernet" networks, which you are very unlikely to find anymore, especially not at home! However the AUI port can be used to connect a transceiver which converts it to another Ethernet type, transceivers from AUI to both 10Base2 and 10BaseT are available at less than £30 and can be a good way of using an older Zorro card with a more modern network.

### Drivers

Any networking hardware from a simple parallel cable to a Zorro Ethernet card needs driver software to enable programs to access it. Sometimes this driver is built in to the network program so it is limited to particular hardware, for example Parnet can only run over a parnet cable, but more commonly separate drivers are used so the network program can access any hardware which has a suitable driver. AmigaOS has a standard for network drivers called SANA 2 (Standard Amiga Networking Architecture version 2), most network cards are supplied with a SANA 2 driver and other types of networking hardware including PCMCIA Ethernet cards, parallel and serial cables and dial-up networking are supported by third party SANA 2 drivers (many of which are available on Aminet). Some networking software has its own standard for network drivers. For example in addition to

SANA 2 Miami also supports its own MNI (Miami Network Interface) drivers which are faster than SANA 2 but support a smaller range of hardware.

## Networking Software

### Parnet/Sernet

Parnet is a simple Amiga only networking package that connects Amigas by their parallel ports using a custom cable. Sernet offers similar features but connects the Amigas using an RS232 null modem serial cable. Parnet is configured using a simple text file on each Amiga, then a server is started on one machine

and a client on the other, on the client machine's workbench a device called NET: appears, this contains a directory for each drive on server (for example the server's startup-sequence would be found in NET:Workbench/s/startup-sequence on the client). From then on the drives can be accessed from the Workbench, shell and other programs as if they were on the client machine. If required servers and clients can be run on both Amigas so each can access the others drivers. Several other utilities are available which run over Parnet such as a simple chat program and the ability to "remote control" one Amiga from the other's mouse and keyboard. The original Parnet distribution has to be hand installed and configured however there are now a number of packages such as ParBench on Aminet which include an installer which copy the files and configure the network. Parnet is Freeware and the source code is available.

### Pronet

Pronet is similar in concept to Parnet but rather more modern in design, firstly it supports separate device drivers (although it doesn't support SANA 2), drivers for parallel (both built-in and Multiface 3 card) and serial ports are supplied and you can connect using several device drivers at a time so you could have one Amiga connected to your serial port and another to your parallel port. Parallel connections use a parnet cable and serial uses a null modem cable. A text configuration file is used to define the interfaces available on each

machine then a server program is started. On the client Amiga a different shell command is issued to mount each drive required from the server. Unlike

Parnet you can choose which devices from the server are available on the client and they are mounted directly, each one appears as a separate icon on the client Workbench. Other advantages over Parnet are that client machines (but not servers) can be rebooted without causing network problems, network drives can be disconnected and changing discs in removable devices is supported. Additional utilities which run over the Pronet network are available including chat and

remote control like Parnet. Pronet is now freeware and the source code is included in its archive.

### Envoy

This networking package was designed by Commodore as a means of linking Amigas, the current version, 3.0, was updated by Heinz Worbel and released by Schatztruhe in 1998. Envoy is a commercial product selling for about £30 with a two machine license. Envoy can be used to connect two or more Amigas over any network hardware with a SANA 2 driver. Envoy is a complete package providing both the network link and variety of services which use the link such as file and printer sharing. It can also be set up to run along side TCP/IP so you can have Envoy and Internet access at the same time on the same network.

The big advantage of Envoy over other network packages is that it is self contained with clear GUI tools for configuration and maintenance of all aspects of the network. Font sensitive GadTools based programs are used to set the initial configuration of each machine and then to choose which directories, drives and printers should be available to others on the network. The Users preferences editor allows you to set up individual users and place them in groups with specific privileges, when you set up a network drive or printer you can choose who will have access to it.

Envoy is a step above the likes of Pronet as it offers far more control over the network, printing support and a level of security. If you have an Amiga Only network Envoy is an excellent and easy to use tool, it is ideal for a home or small office network. However if you have a mixed network, even one with several Amigas, you may prefer to spend time setting up Samba which can achieve most of Envoy's functionality and also works on many platforms.

### PC 2 Am

PC2Am is a network solution used to link an Amiga and a PC running MSDOS 6 or later. The documentation says it works under Windows 95 (with long file name support) so therefore I would assume it will be OK under 98 and ME but probably won't work on NT or 2000 which don't support DOS programs anymore. The two computers can be connected by a null modem serial cable, a laplink cable or a custom parallel cable described in the documentation, the custom cable provides the best performance at about 40Kb per second. With PC2Am the PC's drives appear under the PC: device on the Amiga, then you can read and write to the PC drives from any program as if they were directly connected to the Amiga. However the Amiga's drives cannot be accessed from the PC. An interesting feature is that several other PC devices in addition to drives can be accessed from the Amiga these include prt: which is the PC printer. Data copied to this device will be sent to a printer connected to the PC, note that other than for plain text you will still need a suitable driver for the PC printer on the Amiga side.

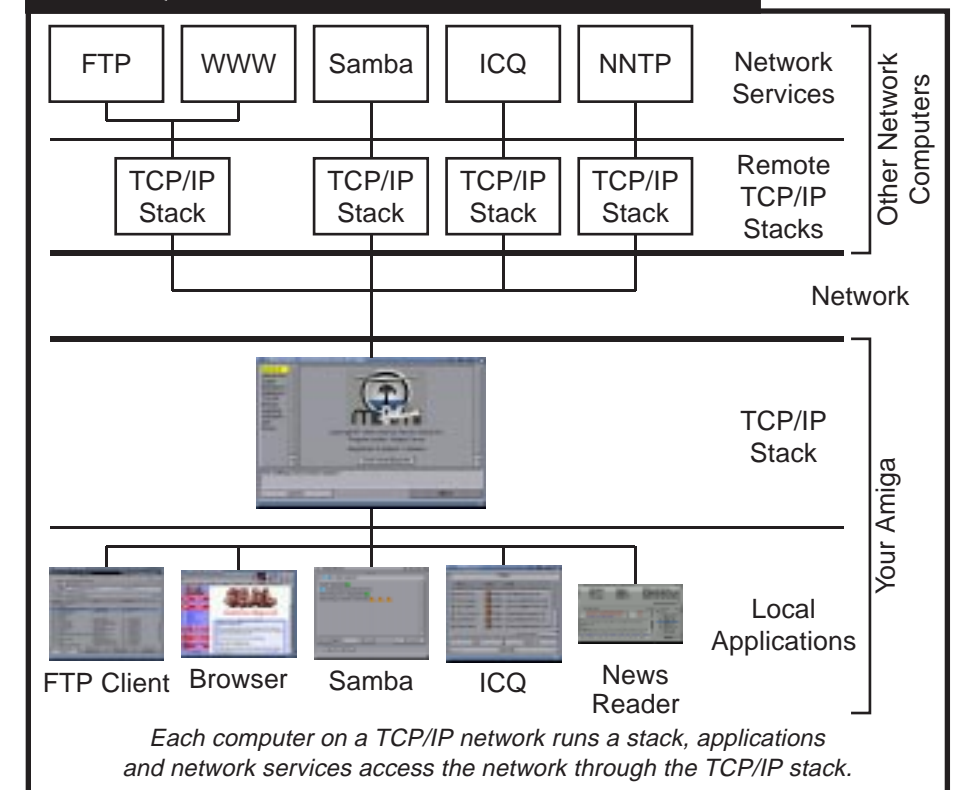
### TCP/IP

Transfer Control Protocol / Internet Protocol (Commonly referred to as

TCP/IP) is the data transfer protocol used on many networks including the Internet, it is an open standard available on a wide variety of operating systems and platforms. TCP/IP provides a means of moving data between devices on a network, it does not provide any network services to the user. Each machine connected to a TCP/IP network runs a TCP/IP stack which handles the network connection and provides services to any programs running on the computer which require network access. Many operating systems include a TCP/IP stack, on the Amiga the TCP/IP stack is a separate program such as Genesis or Miami although Genesis is now included with the OS. All the TCP/IP stacks on the Amiga support SANA 2 network devices so they can be used on a variety of networks, if you want to connect to another type of computer then its TCP/IP stack must support the type of connection you want to make. If you're using Ethernet then this will be supported on most systems, serial is also well supported but parallel connections are more difficult, and as far as I know only possible with Linux.

Once your Amiga is on a TCP/IP network there are many different programs that will utilise the connection, here are some of the ones that may be useful on a small network:

## TCP/IP Network Structure





## Application Software

### FTP

The File Transfer Protocol is used to transfer files from one machine on a TCP/IP network to another, it can also be used to perform simple file operations such as deleting and creating directories across the network. FTP is a client server system, a server must be run on the machine from which you want to access files and a client on the receiving machine. Many people will already be familiar with FTP clients as they are often used on the Internet, the Amiga has many excellent ones such as AmFTP, AmiTradeCenter, OpusFTP and FTPMount. FTPMount and OpusFTP are of particular interest as they allow you to access FTP servers as if they were hard drives, this can be particularly useful if you are using FTP on a local network. A variety of FTP servers are available on Aminet and you can also get them for most other platforms.

### Samba

Samba is an open source network package that makes any machine running it appear like a Windows PC on the network, at first this may seem like a bad idea but it does have many advantages. With Samba you can access drives and printers shared by Windows users on your network and by anyone else with a machine running Samba. As Samba is available for many different machines and operating systems it can be a common denominator making a mixed network very compatible. Several ports of Samba have been made for the Amiga, the most recent by Olaf Barthel is excellent. Samba's main problem is that it is complex to set up, you have to make some changes to your TCP/IP stack and configure the drives and printers to be shared via a text file or a form displayed in a web browser. Then the other machines you want to access also need to be configured. There are now some excellent websites with extensive tutorials but even so be prepared to spend some time getting it all up and running. However once you have it working Samba is very effective and it's a nice feeling being able to manage your PC's files with directory Opus or print from a PC program onto your Amiga's printer (and vice versa).

### NetFS

NetFS is a simple system which allows you to access volumes (hard disk par-

titions, CDs, ZIP disks etc.) mounted on one Amiga from another over any TCP/IP network. On the server machine, which will make its volumes available, you need to install the netfs-server command and make two changes in the TCP/IP stack's configuration. On the client machines that will access the volumes the netfs-mount command and netfs-handler need to be installed and one configuration change is required on the TCP/IP stack. Network volumes can then be mounted on the client using the netfs-mount command or you can make a MountList or DOSDrivers for the remote volumes enabling them to be mounted like any other device. NetFS has only very limited security features, you can make a volume read only or not available for mounting across the network but you cannot set access for particular users or require a password. Because of these limitations NetFS is best suited to home networks where all the users are reasonably trust worthy, they also mean that it would be unwise to connect a network running NetFS directly to the Internet without a firewall although because the protocol is Amiga only it provides, to quote the docs, some measure of "security through obscurity"!

### NFS

Not to be confused with the Amiga only NetFS described above the Network Filing System was developed by Sun Micro Systems and is commonly used on Unix based machines to share files over a network. NFS is a client server system with file servers making directories and their sub-directories available to client machines across a TCP/IP network. On the Amiga only a NFS client is available (ch\_nfsc from the AmiTCP package) so it is of limited use unless you have another machine running a different OS providing an NFS server on your network. On the plus side NFS clients are available for most operating systems so if you want to set up a central file sever NFS would be a good way to access it.

## Sharing an Internet Connection

If one of the machines on your network is connected to the Internet it is possible to make that connection available to the other machines so that several people can access the Internet simultaneously. There are several ways of achieving this, two of the most common are:

### IPNAT

IP Network Address Translation (sometimes called IP masquerading) is a facility provided by some TCP/IP stacks. The machine connected to the Internet has IPNAT turned on and the other machines on the network are set up to direct all requests for data from the internet to the connected machine, it becomes their gateway to the Internet. IPNAT does its bit by making it look to the outside world as if all the requests come from the connected machine, when replies are received IPNAT works out which machine on the network requested the information and sends it across the local network to the correct machine. The advantages of using IPNAT are that it is transparent to applications on the client machines and no special facilities are required in their TCP/IP stacks. The only Amiga TCP/IP stack to support IPNAT is Miami Deluxe from Nordic Global so if your Amiga is connected to the Internet and you want to share its connection using NAT you'll need to register this product. Windows 98SE and above on the PC include IPNAT which call Internet Connection Sharing, IPNAT is also a feature of Linux and I believe all other Unix like systems. If your Amiga is using one of these machines as its Internet gateway then any of the Popular TCP/IP stacks will do, Genesis, standard Miami and of course Miami Deluxe.

### SOCKS

SOCKS (which isn't an acronym for anything as far as I can tell) works in a similar way to IPNAT in that a SOCKS server runs on the machine connected to the Internet, sends out requests and passes the information received back to the requesting client. However unlike NAT applications running on the client machines, for example web browsers or FTP clients, have to support SOCKS and be individually configured to use the SOCKS server. Some platforms have a SOCKS client available which runs in the background and allows most programs to run seamlessly over SOCKS once it has been installed and configured. A SOCKS client is built into the popular Amiga TCP/IP stacks and a quick Google search found at least one free client for Windows. If you want to use your Amiga as a SOCKS server (it will be the machine connected to the Internet) then you will need either Genesis (plus the server which is available on Aminet) or Miami Deluxe.

### Security

If you are running any sort of server that gives access to your files and your network is also connected to the Internet you should give some thought to security, if you do not it may be possible for someone out on the Internet to connect to your machine and access your files. As well as accessing private information they may be able to damage your data and even remotely control your computer for nefarious purposes. The best solution is to have the Internet connection on one network and the local machines on a different network, only one machine needs to be connected to both networks, the one acting as the gateway for Internet sharing. If your Internet connection is via a modem you will end up with two networks, one consisting of the Internet machine and the rest of the Internet and the local Ethernet (or other type of network). The problem comes when you have a cable modem or other network device connecting you to the Internet, if you plug this into a hub you are effectively connecting your whole network to the Internet which could allow undesirable access to your network. A much better solution is to fit one machine with two Ethernet cards, connect one to the network and the other to the cable modem (or similar), this will then work in the same way as the modem set-up. Further protection is offered by a firewall, these programs can be configured to prevent unauthorised accesses to all the machines connected to the local network. Miami Deluxe's built-in firewall is the only one I know of for the Amiga, if a PC is your connection to the Internet then there are lots of firewall products to choose from.

## Conclusion

If you have got this far through the feature you will no doubt realise that networking is a large and complex subject. I've only scratched the surface here to give you an idea of what you can do and which type of network might be best for your situation. There's not space in this magazine to go into the detail of setting up a network, if you want to have a go I would recommend taking a look at some of the websites I've listed in the box out and reading the documentation that comes with the networking software you've chosen. A bit of time invested will pay off in the long run and you may even enjoy it!

## Web Links

Many of these links refer to Aminet, there are many Aminet sites around the world, the home site is [www.aminet.net/~aminet](http://www.aminet.net/~aminet), for UK readers our local mirror is at [uk.aminet.net/~aminet](http://uk.aminet.net/~aminet). To find the files referenced here just click on the "Tree of Aminet Directories" link and navigate to the appropriate directory or use the search facility.

### Downloads

Pronet: Aminet, comm/net/ProNET34.lha

Parnet: Aminet, comm/net/ParBENCH31.lha or similar, there are several distributions.

Sernet: Aminet, comm/net/sernet24.lha

**Pages on the GReX and Mediator PCI bus boards:** [www.vgr.com/cybergfx](http://www.vgr.com/cybergfx)

### TCP/IP

Miami and Miami Deluxe: [www.nordicglobal.com](http://www.nordicglobal.com)

Genesis: [www.haage-partner.com/products/genesis\\_e.htm](http://www.haage-partner.com/products/genesis_e.htm)

### SOCKS

SOCKS home page: [www.socks.nec.com](http://www.socks.nec.com)

A free Windows SOCKS client:

[www.hummingbird.com/products/nc/socks/index.html](http://www.hummingbird.com/products/nc/socks/index.html)

Server for AmiTCP/IP and Genesis: Aminet, comm/tcp/Socks5.lha

### Samba

Illustrated installation and tutorial: [www.amigasamba.org](http://www.amigasamba.org)

Latest Amiga port of Samba (at time of writing): Aminet, comm/tcp/samba\_2.0.7.lha

### NetFS

Aminet Download: comm/net/netfs053.lha

A later version can be found in: Aminet, comm/tcp/AmiTCP-demo-40.lha

An even later version is mentioned on [www.cli.di.unipi.it/~chiarito/netfs.html](http://www.cli.di.unipi.it/~chiarito/netfs.html) but I couldn't find a download.

**NFS, ch\_nfsc and utilities Can be found in:**

Aminet, comm/tcp/AmiTCP-demo-40.lha

**FTP, Amiftpd, shareware (40USD) FTP server with GUI:** <http://www.cnetbbs.net>

### General Networking Information

For straightforward explanations of how some of the technologies I've mentioned here works try the excellent [www.howstuffworks.com](http://www.howstuffworks.com). For example:

Ethernet: [www.howstuffworks.com/ethernet.htm](http://www.howstuffworks.com/ethernet.htm)

Serial: [www.howstuffworks.com/serial-port.htm](http://www.howstuffworks.com/serial-port.htm)

Ethernet FAQ: <http://www.NetworkUptime.com/faqs/ethernet>

This page by an anonymous Rob (he doesn't mention his full name) has lots of useful networking information in the Siamese and Amiga sections:

[www.dynamix.plus.com](http://www.dynamix.plus.com)

### News Groups

You can read these groups in a stand-alone news reader such as Thor, NewsRog or Microdot. If you prefer the website <http://groups.google.com> allows you to read news groups with a web browser.

Amiga specific networking news group: comp.sys.amiga.networking

General ethernet networking news group: comp.dcom.lans.ethernet

(be prepared for lots of people interested in networking 1000s of users in their company as well as home users):



## Something Fishy

Reviews are very subjective, what one reviewer may love, another hates. Such is life. So we decided to have a general score, which the reader can take into account along with the text.

So we invented the fish... it's easy to work out which we feel is a better product... the more bones that show, the smellier the fish :). We only award our top Caviar rating to products that are practically perfect.



**Caviar**

The best so far! We can hardly pick anything out of it, not even boogers. Rarer than Nessie.



**tasty**

This product is definitely worth buying but, like most things, still has room for improvement.



**FISH FINGERS**

Average, neither too good nor too bad — it works but there are areas which need major improvement or are way behind competing products.



**SMELLY**

Crap, but hopefully getting better in future versions (if there are any).



**ROTTEN**

Disgusting, multicolour yawn inducing abomination that insults the Amiga.

# DrawStudio

**As Kickstart re-release DrawStudio it's a good opportunity for Robert Williams to have a look at this structured drawing program.**

**D**rawStudio is a structured drawing program, this means that DrawStudio is used to make images composed of mathematically defined shapes. It is a quite different to bitmap based paint and image processing programs that work on images composed of pixels. For example if you draw a square in a paint program it is formed of a certain number of pixels on each side, if you wanted to change the square you would have to undo or erase it and draw it again. In DrawStudio a square is described as four lines of a certain length in a certain position, changing the size of the square at any time is a simple matter of selecting it and moving its sizing handles with the mouse. Structured packages have advantages and disadvantages compared to their bitmap cousins, on the plus side structured images can be scaled to any size without becoming pixelised and are easy to edit as each element can be manipulated at any time. However structured drawing is not suited to producing photographic images and tends to be less spontaneous.

## Installation

Installing DrawStudio from the CD-ROM is simply a case of copying the drawer containing the appropriate version, FPU or non-FPU, onto your hard disk. Included on the CD are registered versions of ImageStudio (a simple, very memory efficient, image processor) and Texture studio (which renders Imagine procedural textures) these were written

## Product Information

**Developer:** Andy Dean and Graham Dean  
**Distributor:** Kicksoft  
**Tel:** +44 (0) 1737 215432  
**WWW:** www.kicksoft.co.uk  
**Price:** \$50 (about £35)

by the Authors of DrawStudio and are well worth having. To help get you started with DrawStudio Kicksoft have put a collection of clip art on the CD too.

## Interface

Even though DrawStudio uses MUI for its interface the authors have managed to disable some of MUI's features so you can't do all the customising you would normally expect, the most obvious limitation is that DrawStudio must be run on its own screen. The display settings within DrawStudio are used to select the screen mode used and also how the page is rendered. Four rendering modes are available, mono, grey scale, 8bit colour and 24bit colour, DrawStudio generates the page display in the mode selected and then renders it to display on the selected screenmode. For example it will render a 24bit page to display as well as possible on a 256 colour screen. The render mode selected influences the detail which can be displayed and also the memory used. Obviously mono uses the least memory but shows colours and grey shades in roughly dithered black and white. Greyscale shows the page in full detail, including transparency but with no colour. 8bit uses 256 colours to give a dithered colour display but does not show transparency. Finally 24bit shows the page in its full glory complete with transparency, this luxury also uses the most memory for the display. This is one of DrawStudio's strong points, you can tailor it to work well on slower systems by sacrificing quality for speed.

## Drawing

Each DrawStudio document (you can have several open at once) has its own window, the main area of the window is the page display with a set of tool buttons down the left hand side. Each

document can have multiple pages and each page can have a different size, either chosen from a list of common paper sizes or any custom size you enter. To draw on the page you simply click on the tool of your choice and then draw it onto the page with the mouse. All the basic drawing tools are provided including line, polygon, rectangle and oval, the last two can be constrained to square and circle respectively by holding Shift while you draw. There are also some more complex tools available such as the bezier curve which allows you to draw curved shapes with any number of points, the resulting path can be open or closed. Once you have some objects on your page you can edit them by selecting the pointer tool, clicking on an object selects it, then you can move or re-size it and apply other settings and effects which I'll talk about later.

A great deal of thought has obviously been put into making DrawStudio as comfortable to use as possible. The main drawing aids are the excellent snapping controls, as in most programs you can snap to the user definable grid but DrawStudio also offers a snap to object mode so the point you're drawing lines up perfectly with the corner, line or curve of another object. When the pointer is close enough for an object snap to

occur it changes into an icon representing the type of snap (corner, line or curve), very neat and easy. In addition to the different render modes mentioned above DrawStudio can be set to display purely in wire frame to speed up display on slower machines, intelligently when you scroll the display the program switches to wireframe mode so it can scroll smoothly then redraws in full only when the scroll bar is released. Another display mode shows you what PostScript output would look like as it is unable to display all DrawStudio's effects, in particular transparency. The icing on the ease of use cake is that almost every requester in DrawStudio includes a neat preview so you can see just what changes your settings will make before you accept them.

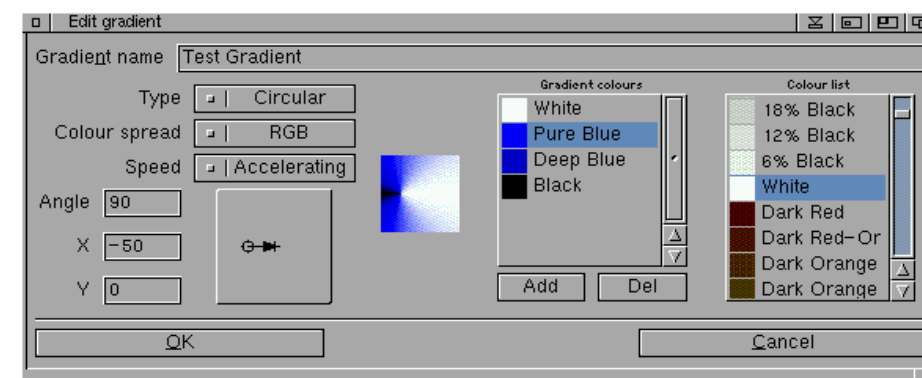
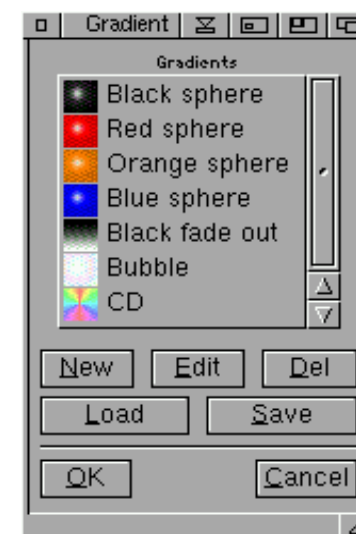
## Layers

Each page in a document can have several layers, much like the layer systems in recent bitmap graphics programs. Objects are placed on a particular layer then the layer can be hidden or greyed, this can make working on a complex drawing much easier as the objects on other layers don't get in your way. If you like you can still snap to objects not on the current layer. To give an example you could have a plan of your house on one layer and all the furniture on another layer. If the furniture layer was the current one you would be prevented from accidentally moving part of the house but you could still snap a kitchen unit neatly to a wall.

## Fills and Colours

DrawStudio offers a range of styles that can be applied to the line and/or the fill of an object, these are selected in the Object Attributes requester. The available styles are colour, gradient, pattern

*Pick predefined gradients from the list (left) or mix your own using the Gradient editor. The extensive use of thumbnails for the colours and gradients makes these requesters a pleasure to use.*



## Warp Factor 10

*Stretch and squash objects into almost any shape using the envelope feature the warp command:*



*Just drag the handles to define the envelope.*



*Then double click the background to apply!*

or bitmap. The colour style fills the object or line with a solid colour, you select the colour you wish to use from a pre-defined list, each colour in the list has a small preview so you know what you're choosing. If the colour you want isn't available by default you can add a new colour to the list and choose its shade using a colour wheel or component sliders. You can set the transparency of a colour so that an object filled with it will reveal objects beneath, tinted with the selected colour. Gradient fills are a smooth transition between two or more of the colours in your list, a selection of sample gradients are supplied or you can create your own. There are several different gradient types including radial, linear and circular, you can set the gradient direction and for the radial and circular types the centre point which makes creating "shiny ball" effects easy. You can include transparent colours in your gradient, this feature can be used to create great fade effects simply by overlaying the objects you want to fade with an object filled with a transparent gradient. Usefully, custom colour lists and gradients can be saved for use in other documents. Pattern fills are based on a 8 by 8 pixel grid which is then tiled to fill the shape, you can select from pre-defined patterns or create your own. The final fill type is bitmap, this allows you to fill Lines or objects with a bitmap image such as a photo. The bitmap can be set to fit the shape or to tile inside, with the tiling option you can set the size of the tiles to get the effect you want.



## Bitmaps

In addition to using a bitmap as an object fill you can also insert bitmap objects into your document, this is achieved by first loading the image into DrawStudio and then placing it on the page. This process is slightly more long winded than other packages but it has the advantage that DrawStudio only loads an image once, regardless of how many times that image is used in the document. All the common bitmap formats are supported for loading including IFF, JPEG and TIFF. You can also choose to save any combination of objects or even a whole page as a bitmap image for use in other programs or on a web page. If you're saving in a 24bit format such as IFF24 or JPEG you can switch on the Antialiasing feature which smooths out the jaggies in curved and diagonal lines when they are saved as a low resolution bitmap.

## Fonts

Postscript fonts are supported and there is a built-in font manager which allows you to access fonts installed anywhere on your system, so DrawStudio can share a common set of fonts with other applications. As PostScript fonts are scalable they produce perfect smooth output at any size, DrawStudio also allows you to convert a text object into its component shapes so you can manually edit the letters, idea for logos. Like any other object text can have its own line and fill styles and you can also apply any of DrawStudio's special effects. While the text support is ideal for projects with a small amount of text you wouldn't want to add large blocks of text to a DrawStudio document as there is no line wrap support (you must press Return at the end of each line) and each block of text must all be in the same format (you can't make a single word in a paragraph bold or underlined for example). Another limitation is that you cannot import text from a file, every word must be typed into a text box.

## Special Effects

A selection of special effect features can help jazz up your documents (although most of them are best used sparingly!). The most flexible is the warp effect which can form the objects you select into a certain envelope. A variety of pre-set warps are available in the Warp requester, some examples are perspective, arc and parallelogram. If you're



The main DrawStudio window.

feeling adventurous you can make a custom warp by dragging four handles around the shape to create your own envelope. Text on a curve wraps any text you select along a curve or around a circle. There a plenty of options allowing you to set the offset from the curve and how the text is sized to fit the available space, as usual a preview helps you make the right choices.

## Output

In addition to saving bitmaps which are compatible with almost any package DrawStudio can save its output in various structured formats. As you would expect the native DrawStudio format supports all the program's features including multiple pages and transparencies however as far as I am aware no other programs are able to load or save this format. The other supported formats are IFFD2RD and EPS. IFFD2RD is the standard Amiga structured drawing format and is supported by most other drawing and DTP programs, however it does not support all DrawStudio's features. EPS is in the same boat on features support but it is compatible with many recent programs on the Amiga and other platforms, as EPS is a type of PostScript you can use the PostScript display mode to check exactly what will be saved. As only DrawStudio's own format supports all the programs you will probably need to save as a bitmap at an appropriate resolution to get the full effect into another package. Although this isn't a major problem it is a pity that a powerful, widely supported, structured graphics format hasn't appeared on the Amiga.

TurboPrint, PostScript and preferences printer drivers are supported for printing from DrawStudio, of the three only TurboPrint will really do DrawStudio justice by printing in full 24bit colour.

## Cons

I can find very few negative things to say about DrawStudio, if I had to find one area it would be that the interface can feel a bit clumsy, in particular the way you have to open requesters to perform many functions. Most graphics and DTP programs now use palettes so these functions can remain available while you work on different objects, making their interfaces feel more fluid.

## Conclusion

DrawStudio is an extremely useful tool both for creating images for use in other applications and for short, graphically oriented documents. I've found it particularly good for projects where I want to mix bitmap and structured elements, it's here that those transparent effects really come into their own! You soon learn the quirks of its interface and begin to enjoy the wealth of powerful features. It's sad that a program of this calibre is no longer being developed however top marks to Kickstart for publishing it again at an excellent price.

## Results

### Pros

Powerful, wide range of features. Excellent value for money.

### Cons

Interface slightly old fashioned. No further development.



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### Photogenics 5

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# Photogenics

Mick Sutton and Rpbert Williams look at the latest version of an old favourite.

**P**hotogenics for anyone who isn't aware is a 24 bit paint and image processing package with a unique way of working, it allows you to paint on and off all manner of effects and has a vast array of real world painting tools making it ideal for experimentation and producing really artistic looking results!

The minimum requirements are:

68030 CPU  
8Mb RAM  
Amiga OS 3.0  
CD ROM drive

but you really need:

50mhz 68060 CPU  
a 16 or 24bit display  
16Mb or more RAM

Since Photogenics 4 was released in 1999 it has gone through many minor upgrades each adding more features and improving stability. Version 5, that we are looking at here was released in March this year and is the first version that is available for multiple platforms (Amiga, Linux and Windows). Although there are some major new features in version 5 it is a fairly small upgrade from the last upgrade of version 4 (4.5), the jump in version number reflects the move to multi platform. The good news



The new batch conversion window is simple and effective.



The tips are really useful and once you've read them just switch them off!

is that this upgrade is free to Amiga version 4 owners!

## So what's new since our review of version 4?

When you load Photogenics for the first time the preferences window opens allowing you to select your desired screenmode, undo levels and GUI related options. Once you have saved your settings Photogenics loads and displays a "Tip of the day" window, these tips are both useful and quite detailed however, if you really don't like them they can be disabled. Since the original version 4 release there have been lots of minor improvements in the GUI such as much clearer tabs in the tools window (labelled options) which are selected automatically when you move your pointer over them (this can be disabled) which can make operations much faster but takes some getting used to. The toolbar icons now "roll over" (get a 3D look) as your pointer moves over them and almost all gadgets have tool tips (pop up help bubbles) which appear if you hold your pointer over the for a few seconds.

The NGIO tab in the tools window which showed the savers and print modules in version 4.x has been removed, save formats can now be selected from a window that opens when you select save as or the save icon on the toolbar. Printing seems to have disappeared! There is an icon on the toolbar but click-

ing it opens the save as window..... hmmm, lets hope this is oversight on Paul's part (can we have our printing option back please Paul). Some things have been added to the GUI, one of the most useful being the inspection tab, this shows a close up view of the image under the pointer, ideal for detailed work. If you are zoomed in on the image the inspection tab changes to show the un-zoomed image so you can see the overall effect of the changes you make.

## Loading and Saving

File format support has been improved there are now loaders for Photoshop, PCD and a variety of common Unix formats. The PCD loader is particularly useful because it allows you to select the image resolution and orientation before loading, most of these formats with the exception of PCD are also available as savers. During the development of version 4 a new file format unique to Photogenics was added, this supports all Photogenics features so you can save an image complete with layers and effects. This is very useful indeed as it allows you to work on a complex image over several sessions, and for those of us that don't get that perfect result first time there's no need to stay up till 3 AM till we get it right!

Whilst on the subject of savers, a new save for Internet window has been added, this shows you the effect on both quality and file size of different JPEG and PNG quality settings. You are

## Product Information

**Developer:** Paul Nolan  
**Available:** from Kicksoft and other dealers.  
**Tel:** +44 (0) 1737 219280  
**WWW:** www.paulnolan.com  
www.kicksoft.co.uk  
**Price:** \$99 downloadable from Paul's website.  
£70 on CD from Kicksoft.

shown before and after thumbnail of the image and estimates of how long it would take to download at various modem speeds.... wicked! GIF is still not supported in the Amiga version, probably due to licensing issues.

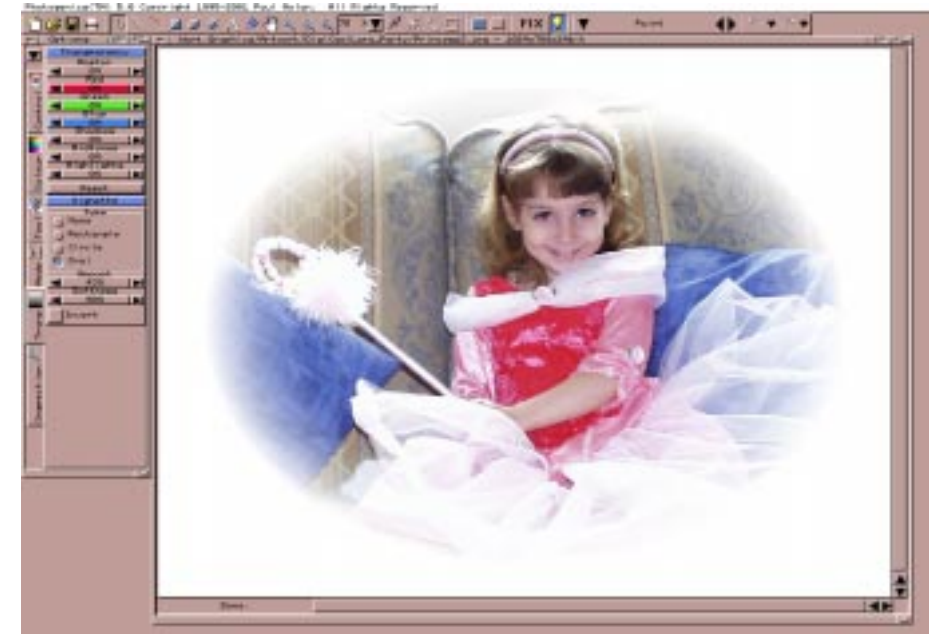
## New Effects

So what new image processing and painting features are there in version 5 then? Well for starters there's the new transparency and vignette tab in the tools window, these features allow you to set the overall transparency of the paint layer in different ways. The transparency section has sliders which vary the transparency based on aspects of the image such as the three primary colours (RGB), shadows, midtones and highlights, you can still paint on and off with the mouse. This feature allows you to easily apply an effect to a particular part of the image for example you could use it to lighten or darken shadow areas. Vignettes work in a similar way but limit the effect to a border around the image which can be rectangle, circle or oval, you can set the size of the border and how it blends into the image, this is good for quickly "framing" photos (see example screenshot xx).

The text feature has been vastly improved in functionality and more importantly ease of use, you can now have multiple text boxes on the image at once, each with a different font and settings if you should wish and all the boxes remain editable until you fix the layer. Another fine feature is the anti-aliasing options which smooth out the jagged edges on text, and there are three levels to choose from, low, medium and high. The text boxes themselves have been improved with eight larger sizing handles which makes them much easier to manipulate, this welcome improvement has also been applied to the crop tool, the single pixel handles in version 4 were very frustrating indeed!

A totally new feature is batch file conversion, selected from the project menu a window with a simple source file list, destination, and file format selection allows you to convert all the selected files to any of Photogenics save formats.

Two of the tool bar functions have been enhanced, the move tool and the symmetry tool. You can now choose to move the secondary image (the image that is used for rub through), the alpha channel or both together with the move tool, in



Lara Sutton demonstrates the vignette effect!

addition to it's old function of moving the layer. The symmetry tool now has the option to set the number of levels you wish to use, so now you can draw some very complex kaleidoscopes!

A few new paint modes have been introduced in version 5, but there have been many added since the original version 4, some of our favourites are bizarre pixelise which is a bit like looking through a glass brick wall, honeycomb which breaks the image up into hexagons, remove red eye (does what it says on the tin), bumpmap produces a full colour emboss effect, star blur and plus blur. There are also a whole host of rub-through options, which are handy as this is how you composite images in Photogenics.

## Perfect?

There are a few improvements that we feel could be made, probably the major one is cleared layers management, currently Photogenics has a pop out menu of layers which makes it difficult to tell where the current layer is in relation to the others. It would be nice to see a separate layers window with drag and drop sorting, name labels and icons to show hidden or visible layers (Art Effect 4 has a window like this and we found it much clearer). On some effects and operations the progress bar does not seem to keep in time with what's actually happening, sometimes leaving you wondering whether something is happening or if it's hung! Another thing we would like to see in future versions is

moving between text gadgets with the Tab key as currently you have to use the mouse to select each one. All these gripes are minor and none of them impair the use of the package.

In summary Photogenics 5 is an excellent program and has come along in leaps and bounds since the initial version 4 release, the fact that version 5 is a fairly small step from 4.5 is reflected in the free upgrade. If you are at all interested in graphics Photogenics is a must have application it has an excellent mixture of realistic painting tools and powerful effects all of which seem to run considerably faster than the competition, go on treat yourself!

## Results

### Pros

Excellent range of features and unique ways of using them. Upgrades have really improved it. Version 5 is a free upgrade.

### Cons

Layers management not intuitive. GUI can be sluggish.





# Artec AM12S

After seeing and using the scanners at my college for various assignments and projects, I thought I wouldn't mind having one at home for my trusty miggy. So I had a look around at various computer outlets, but found my choice was somewhat restricted because most scanners now are USB. At the same time I had a look at the software available on the Amiga, and what scanners

they supported. And so I didn't have much luck in the outside, so instead I had a look at what the Amiga retailers had to offer, obviously the choice was restricted, but I knew the scanners would be better supported. I saw Analogic doing Umax scanners, bundled with PhotoScope for £139.95, or £159.95 with a Squirrel interface. My mind was made up. After three weeks of waiting, the scanner finally arrived, only to find that it was an Artec, not a Umax scanner. I found it to be virtually the same spec scanner as the Umax one I hoped for, so I wasn't that bothered.

## Plug it in!

The first thing I noticed when I went to switch the scanner on, was that there was no on/off switch, and the second thing which is most important before you

use the scanner is to switch the carriage lock into unlock position, as I remember from a recent scanner demo at SEAL. But I've found that it doesn't work anyway, and it needs extra care when being transported around.

Unfortunately I wasn't too sure what I was doing, as the scanner came with no manual, but came with PC software (Adobe Photo Deluxe), and obviously came with Photoscope, which did thankfully have a manual.

Another problem I ran into was trying to get the scanner to be recognised on my Amiga (via my GVP SCSI card). I tried updating the drivers for the SCSI card which made no difference whatsoever. Robert tried the scanner on his A3000, which has built in SCSI, to make sure it was the GVP card at fault and not the scanner, and found that to be the case.



The AM12S has a minimalist design, even lacking an on/off switch!

So my only option was to either get a CyberSCSI add on to my accelerator, or get an Oktagon card, which was the option I took.

And so when the Oktagon card arrived and was fitted into my A4000, I had to change a couple of jumpers, set the right device in the PhotoScope preferences, and I was away!

## Scan it in!

In operation, the scanner is pretty quiet, but it's slightly slower than the other scanners I have used. One thing you do have to remember is to allow the scanner about two minutes to warm up, or wait for the green light to come on, which is a bit annoying if you just want to get on with your scanning.

The scanner is capable of 36 bit true colour, it has an optical resolution of 600 x 1200 dpi, and has a maximum resolution of 19200 x 19200 dpi! The scanning area is 8.26 x 11.7 inches (A4 size). The light source is a long lasting cold cathode fluorescent lamp.

Overall I am quite pleased with the scanner bundle, and has so far served me quite well. I've found it to come in handy for quite a number of things, including my college work, and even for my parents! I can't imagine being without it now. I must say, the bundle is good value, considering this is quite a high spec scanner, but if it's speed you need, then I'd look at some of the latest HP or Epson models.

By Elliott Bird

## Product Information

**Developer:** Artec  
**Distributor:** Analogic  
**Tel:** +44 (0) 20 85469575  
**WWW:** www.artecusa.com  
 www.analogic.co.uk  
**Price:** £139.95 incl. Driver  
 £159.95 with Squirrel Interface.

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# Choosing a free call ISP

## Phone bill out of control? Gary Storm might have the answer!

After receiving a huge phone bill from BT, which said that our madasafish account (free ISP... you only pay for the time on-line) had cost us over £40, it was time to sort out some unmetered Internet access. With schemes like this you pay a set fee per month, and enjoy internet access whenever you want it... no more huge internet bills. The only catch is that you'll be cut off after 2 hours or sooner with most of them (but can re-connect straightaway), which is fair enough so people don't hog the access.

So, armed with a copy of Web User (issue 8), the internet, www.net4nowt.com, and a burning desire to stop paying for BT booze-ups I went in search of the unmetered ISP to suit me and my Amiga.

Firstly, after ringing a few places up, I found that some of the information in the Web User article wasn't very well researched (i.e. it was wrong). Here's the ISP's which an Amigan can't use, as they rely on pc software to enable their connections from your computer to work:

It's Good To Give Unlimited.  
 NTL World.  
 The Free Internet Unmetered.  
 Tiny Online.  
 V21 Any Time.

That leaves us with the (apparently) Amiga-friendly ISP's:

**If you're in a Telewest cabled area,** then they're not too bad at £10 a month as long as you use a certain amount of telephone calls through them as well. Help line is at local call rate. www.blueyonder.co.uk .

**If you have money to burn,** Demon offer excellent service, but is very pricey at £40 per month (as £20 goes to BT). www.demon.co.uk .

**A number of ISP's had minimum contract times** of more than a month, which is a bit risky for the user if you can hardly ever get connected or they go bust soon after you join, therefore I put these ISPs on the back-burner for the moment: www.0800dial.com (£12.99, 3 months minimum); www.4thenet.co.uk

(£12.99, 12 months minimum); www.supanet.co.uk (£12.99; 12 months minimum); www.surfanytime.net (£12.99, 6 months minimum); www.worldonline.co.uk (£14.99, 3 months minimum).

**I discounted AOL** because I don't like the idea of a nanny ISP, where your surfing can be dictated by them. The good side to AOL is you don't get cut off, and it's a big company. £14.99 pm, www.aol.co.uk [AOL also needs their PC/Mac only software, Ed].

**I also discounted BT Internet.** Hey, I wanna get away from these guys. £14.99 pm, www.btineter.net .

An invaluable resource is actually www.net4nowt.com, which has a huge list of ISP's in different categories and user reviews and feedback for all of them. Looking through the feedback is one of the best indicators, although of course no ISP is perfect and they all have their share of good and bad feedback. You be the judge.

In the end I decided on www.keme.co.uk, £14.99 a month (1 month minimum contract), some good reviews and they also sponsor www.net4nowt.com (which is brave). When I called up the sales line no-one sniggered when I mentioned Amiga... they just checked to make sure I wouldn't have any problems. They entered my details on the phone instead of the website as normal (as you can't handle the encryption on an Amiga unless you have Miami SSL to pay the fee). They also give you 50mb website space, 999 e-mail addresses, and the quite useful online e-mail access so you can check your e-mail from any computer anywhere. You can even add other mail servers to your account, for instance I can still get my mail from madasafish through keme. The only down-side to keme are that it's not always easy to access during the busy times (which even happened when I was with Telewest).

And there we go, I now enjoy 24/7 internet access, for £15 a month. You could be too.





# Earth 2140



Select your side,  
"it's an East West kinda thing".



Which country shall we flatten today?



The built-in database has details of the many different units and buildings.

## Product Information

**Developer:** Topware Interactive  
**Amiga Port:** Pagan Games  
**Distributor:** Epic Interactive  
**Available:** From most Amiga games dealers.

**WWW:**  
[www.pagan-games.com](http://www.pagan-games.com)  
[www.epic-interactive.com](http://www.epic-interactive.com)  
**Price:** around £30

## Hostilities Begin

Earth2140 is a war strategy type game in the mould of the likes of Napalm and Command & Conquer, where you have control over your forces destiny via mouse control (wish that worked at home), you can think long and hard about strategy and form the perfect scenario for your forces to take over the world, or if you are more like me go in guns blazing and get snookered from a rearward counter attack (ouch). But that's what its all about in this game, no matter what your skill level you will no doubt enjoy it. Strategy games are not normally my cup of tea but after playing the demo I knew that Earth2140 was a quality game, and boy was I right! After loading it up for the first time I couldn't resist playing it, and in fact when I finally stopped playing (to go to bed) I was totally shocked to realise it was 2 AM! This game is just so easy to pick up and get into, even for strategy game amateurs like me as you can set the skill level to suit the type of player you are (I set skill level to easy.....wimp).

## Peace Talks Break Down

The game comes on 1 CD packaged in a DVD case (which I think is the smartest packaging solution) along with a 20 page manual which although not very detailed has plenty enough information to get you going and to be quite fair once you get into the game you will not probably need it as the controls are pretty well thought out and easy to master. Installation is via the standard installer where you make a few choices such as where to install to. Earth 2140 supports 640x480 and 800x600 16bit screenmodes, a graphics card is required. 68k (the documentation states '060 only) and PPC via WarpUp versions are supplied, you select the screenmode and processor you want to

use by double clicking on one of four program icons.

## It's War

On running the game it goes straight into the intro animation which is quite long but gives you a "feel" for the game. Once the intro is finished you are presented with the menu screen which is navigated around by moving the mouse and the screen scrolls (in my case very fast and smoothly) to where you move the mouse to....neat! Here is where you choose what side to do battle for (either UCS or Ed...it's an East West kinda thing) with each side having it's own array of weapons, or you can look at the database where you can view the various buildings, soldiers or vehicles, there are also options for Net and Serial but when I clicked on them I got a message stating these will be available with the mission pack Cd's (can't wait for them). Ok so once you have selected your side you are next presented with a screen to choose your difficulty level (I chose easy....yeah I know I'm a wimp), where upon you are shown yet another screen where you choose the area where this war is gonna take off, having said that I could only choose one for whatever side I fought for but there looks like many areas, mainland Europe, England, Netherlands, Africa and good old USA can be selected if you have the relevant mission packs!

On selection of the battlefield location a short anim loads followed by an objectives screen that informs you what to do which can range from searching for and killing all the enemy units, to more complex missions such as capturing enemy buildings or defending particular buildings or units. Then at last the main game screen opens with the battlefield taking up most of the available area but down the left hand side there is a strip (about one fifth of the screen) that con-



You start with a few soldiers...

tains game information and controls. At the top of the strip you will find a thumbnail map showing the entire battlefield, coloured dots show your units, enemy units, buildings and where battles are taking place. Below the thumbnail the game controls are shown on a series of tabs so they don't take up a lot of room and get in the way. These tabs contain all the information such as how much cash you have, the state of your forces, a summary of your objectives, and game controls such as load and save. One tab allows you to change the behaviour of your units for example you can set them to guard a position, attack or escort another unit. Another feature is the ability to assign a group of units to one of three virtual Generals (yes sir!) who will then automatically control these units, you can set each General to be either defensive or offensive (they will defend the area or go out and attack enemy units respectively).

## The Carnage Begins

I must say the graphics of this game are superb, the main battlefield screen (to the right of the control GUI) is rather well drawn with raised plateau's, trees, grassland and desert sand areas, and when tracked vehicles cross these areas the leave track marks in their wake. Lets go into battle, you can select a single unit by clicking on it with the mouse pointer and sending it into battle or a reconnaissance mission by then clicking anywhere you desire on the map (I don't recommend single units, bound to get outnumbered), or you can drag your mouse over multiple units (soldiers and vehicles) which will select them all and send them off to battle (much better safety in numbers), of course not forgetting to leave a few behind to look after home base in case of surprise attacks. One thing you will notice is that most of the map area is black which means it is



...and before long...

unchartered, but once your troops go on the march the areas light up showing the full detail of the area, this represents your troops visual range and once they move away the area is shown slightly darkened which means although you have chartered the area you can no longer see it! This is best demonstrated when you have moved into an area, moved on, then on your return when you enter the area you may find the enemy suddenly appearing out of nowhere and attacking you (sneaky but cool).

This is where things get really interesting, the battles that take place are just so good to watch with both sides firing at each other, rockets are launched that have amazing smoke trails behind them, the explosions are particularly nice and leave scorched buildings and land behind. There are a whole host of units to choose from with four basic types, robots, armoured vehicles, bikes and walkers. Each type of unit has it's own characteristic speed and strength, they can also have different weapons such as missiles or grenades. Later in the game more advanced weapons become available such as aeroplanes, ships, lazer cannons and plasma weapons. To accompany the carnage is a bizarre selection of CD music which ranges from light metal (almost suitable) through blues saxophone to a real surreal happy tweety tune (has to be heard to be believed), maybe it is designed to make you feel guilty about all the killing going on (almost anti war)... strange!

Wars are expensive and Earth2140 doesn't let you forget it, to build new units you must mine minerals which are then refined and increase your funds. To extract these minerals you need to build a mine which must be located where the minerals are available on the map, there are usually only a couple of places on each level. So now you have your mine you need a refinery to process the



...the action really hots up!

minerals and a Bantha vehicle to transport them, finally the money starts rolling in. The other essential building is a power station, without one none of the other buildings will function. You can build all manner of buildings to enhance your war effort, including a robot factory to build troops, heavy tech to build vehicles, research centre for better units, there are also air and water bases to add variety.

## Enemy Defeated

Earth2140 strikes a good balance between Strategy and playability, even newcomers to the genre will be able to pick it up easily (unlike Napalm which I found very difficult to master), then the learning curve is progressive so you don't get frustrated. The graphics and effects are not only awesome but run very smoothly indeed, even if you are not a Strategy fan this is one title not to be missed.

## Results

### Pros

Smooth game play and scrolling.  
 Variety of units and missions.  
 Difficulty curve "just right".

### Cons

That music!  
 Backgrounds get a bit repetitive.





# Movie Player

Mick Sutton and Robert Williams get into the saddle and rope three top movie players.

## Roundup

Video clips are very common on the internet, from film trailers to interviews with Amiga celebrities, whatever the content a few seconds of un-compressed video would take a long time to download. Many different video formats have been developed with the aim of getting an acceptable quality of video in the smallest possible file size. This has lead to many different formats, developed by different companies and organisations, some of these formats are open (specification is freely available) and others are proprietary (the specification is only available with a licence, usually expensive). As you can imagine this makes developing a player that can play most formats you are likely to find on the internet very difficult, but that hasn't stopped many intrepid Amiga coders trying!

So what formats are there then?

### AVI (also known as video for Windows)

As you can guess this is a format developed (as far as we know) by Microsoft to allow playback of video clips on Windows. AVI is not just one format it can contain audio and video compressed in different formats referred to as codecs, the player must support the codec used to play back the file. Common codecs include Intel Indeo (proprietary but some coders have figured it out!) and Radius Cinepak (spec available).



MPEGs can be compiled on the Amiga using free utilities so they are often used by Amiga artists.

### Product Information

Registered versions of all the players are available on CD complete with sample movies from Kicksoft:

**Distributor:** Kicksoft

**Tel:** +44 (0) 1737 215432

**WWW:** www.kicksoft.co.uk

Or you can register directly with the developers:

#### Frogger

**Developer:**

Sebastian Jedruszkiewicz

**WWW:** frogger.rules.pl

**Price:** 30DM (about £10)

#### MooVID

**Developer:** László Török

**WWW:** www.dfmk.hu/~torokl

**Price:** 68k - 20DM (£7)

PPC - 40DM (£15)

#### SoftCinema

**Developer:** Jacek Cybularczyk

**WWW:**

www.amiga.pl/softcinema

**Price:** 30DM (about £10)

### Quicktime (also known as MOV, its file extension)

This format was developed by Apple and like AVI a Quicktime file can contain video and sound compressed with many different codecs. Popular codecs include Cinepak (again) and Sorenson (proprietary).

### MPEG (Motion Picture Experts Group, file extension MPG)

MPEG is the movie equivalent of JPEG and is an open format available on many platforms, most video clips are in MPEG 1 format, MPEG 2 is designed for higher bandwidth for higher resolution and better quality, MPEG 2 is used on DVD's (Digital Versatile Disc....yeah we know!). This is probably the most commonly found format and fortunately it is not codec based so you should be able to play back any MPEG you find. Currently no Amiga players support DVD

playback, there are two reasons behind this, firstly DVDs are encrypted to prevent copying and any player would need a licensed decoder and secondly no currently available Amiga system is powerful enough to decode DVD resolution video in realtime. In the future a DVD hardware decoder may be developed for classic Amigas and hopefully the new G3 and G4 hardware will have the grunt to do the job in software.

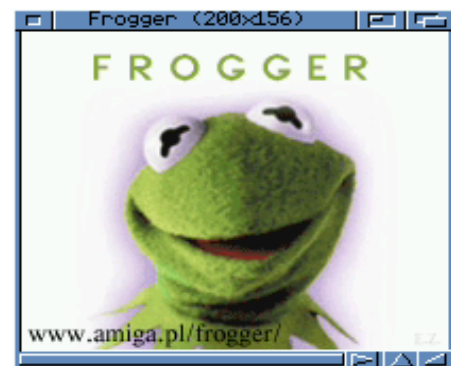
### Other Formats

There are also other formats kicking around such as Real Video (file extension RM) and VIVO (extension VIV) which unfortunately to this day cannot be played on an Amiga. We should mention that even on the PC Real Video can only be played using Realplayer which is covered in adverts and automatically connects to internet sites to update itself (every bloody time you try and use it!) ... horrible!

Now lets have a look at some of the Amiga video players available.

### Frogger

Frogger is an MPEG player which supports MPEG 1 & 2 with audio, although it does have MPEG 2 support, as we've said, don't expect it to play back your DVDs. It does however support all the MPEG files you're likely to find on the Internet and also VideoCDs and movies from PlayStation (1) Discs. When first started Frogger opens a small window with a stylish frog logo, then a file



Frogger and SoftCinema share very similar interfaces.



MooVID has the most complex interface of the three.

requester pops up where you can select MPEG movie(s) to play. Once the first movie has loaded a slider at the bottom of the window allows you to move quickly to any point and there are buttons to pause the playback and to select another file. You can resize the window to scale the movie to any size you wish and there is a useful aspect lock feature which stops you dragging it out of shape. If you have selected more than one MPEG file you can use the left and right arrow keys to skip between them. Various other options are available from the menus, these include the playback speed (from 5 to 35 frames per second in 5 FPS increments), window size (50%, 100% and 200% of the video size), Audio on/off and full screen on/off.

VideoCD's are a special CD format that holds an MPEG encoded movie, a feature film normally uses two Cd's and is about VHS quality (352 x 288 resolution). To play back VideoCD's you need to set the device and unit number of your CD-ROM drive in Frogger's tooltypes or shell options then a track list is shown so you can choose your movie (if there's more than one on the CD) then you can select your screenmode (make sure you pick one that is at least the size of the movie and 15 bit or above). You can also play back movies from Playstation 1 discs (STR and FMV extensions), to do this you have to transfer the file from the CD to your hard disk using the menu's within Frogger, then it can be played back like any MPEG file.....which is nice!

Many settings are only available as icon tooltypes or command line (shell) options but these are all detailed in the AmigaGuide manual. Frogger can display on graphics card and AGA screens, it supports 68k and PPC (WarpUP, PowerUP and MorphOS) and needs 8Mb of RAM so it should run on almost any Amiga. MPEG decoding is CPU in-

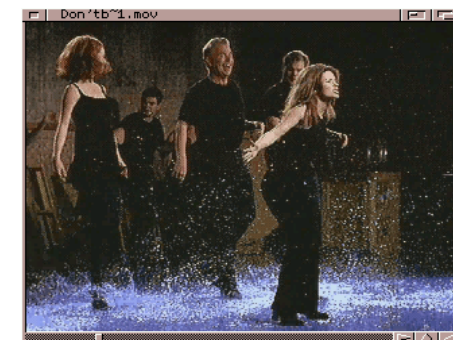
tensive so the faster your machine the better. On a 240 Mhz PPC machine we found a VideoCD played back with little or no skipping (frames missed) so on a PPC machine Frogger should be able to play back all MPEG movies at full speed.

In our experience Frogger has more features than any other MPEG player and is very fast and stable, what more would you want! (Except perhaps a better GUI)

### MooVID

Moovid is a AVI and Quicktime player that supports a variety of codecs (see boxout) and is available for both 68K and PPC (WarpUp), there is also a Picasso IV specific version which uses the PIV's overlay feature. Graphics cards and AGA are supported with a selection of dithering options to get the best out of an AGA display, ECS is even supported but only in 16 greyscales. Moovid can be started via it's workbench icon or from a shell, the settings can be defined in the icon tooltypes or as shell options, they are all documented in the supplied Amigaguide manual. If you don't specify a file to load Moovid opens a file requester when you run it, the really cool thing is that you can select several movies to play in turn....nice!

Once a file is selected the GUI opens, this can be in a separate window or on it's own screen (this is defined by the windowplay option), below the movie image there is a panel of controls including play/pause, volume, brightness and loop. There is also a position slider so you can jump to a specific point in the movie, the skip frame button lets Moovid drop frames to keep the video in sync with the audio (normally not needed on faster machines), the frame rate is displayed and can be changed using increase and decrease buttons and finally there are two buttons to skip between movies if you have selected more than



SoftCinema, simple but effective.

one.....neat! Unfortunately you cannot re-size the window but you could always play back full screen (which is faster anyway).

On a PPC 240 Mhz system all the movies we tried (which went up to 320 x 256, 15 FPS) played back at full speed without any dropped frames. On the 060/50 Mhz the frame rate dropped slightly with the same movies but they were still watchable and in sync with the sound.

In summary Moovid is a very capable player with particularly good support for 68K and AGA only systems, the neat GUI controls make it easy to use.

### SoftCinema

Softcinema is also an AVI and Quicktime player and unsurprisingly is similar to Moovid in many ways, it supports AGA and graphics cards and there are a selection of dithering methods. Likewise the configuration is by tooltypes or shell options and the program can be run from the Workbench or shell. One major difference is that Softcinema is PPC only using PowerUp (it will also work under WarpUp with PowerUp emulation).

When Softcinema is loaded it initially opens a file requester from which to select your movie, only one file may be selected at a time. The playback window (or screen) then opens with position slider, play/pause button and load button on the bottom border (very much like Frogger's GUI), like the other players you have to click the play button for the movie to commence. You can re-size the window any time using the size gadget, or alternatively using the +/- keys which keeps it in proportion....cool! Although you cannot select multiple files you can load a new movie at any time without re-loading the program.

Softcinema supports some codecs not playable with any other Amiga program, it achieves this by using codecs written for Xanim on Linux PPC. These codecs have to be downloaded separately, de crunched using Gzip and then installed in the Softcinema directory.

In our tests Softcinema played back all the AVI and Quicktime movies we threw at it with no noticeable skipping as we expected from a PPC only player. Some extra GUI controls would be nice but the extra codecs supported give it more flexibility. A no frills player that does exactly what it says on the tin!



# PD Paradise

SEAL Members Elliott Bird, Roy Burton and Robert Williams each review one of their PD favourites.

## Workbench on Win

**Licence:** Freeware

**Available From:**

<http://www.commodore-ale.com/wow/>

"Yes, I must confess my sins", I have a PC, a P200 running win95 ("Repent" but I have two Amigas), so this program caught my eye.

WorkbenchOnWin (WOW) is a Windows 95/98 program that emulates the workbench environment; it is freeware and gives the wonderful workbench look to the sad old desktop of Windows. This program cannot run Amiga code in anyway, but gives the feel of the Amiga workbench 3.1 to a PC desktop.

It also gives Popup menus (Like MagicMenu) and a program that can change the look of gadgets. The emulation is very fast, the program is still under development and is far from perfect.

I believe this program has a lot of potential, and when fully developed will give an insight to the advantages of the Amiga. I immediately felt comfortable with a workbench type interface and even if you consider it just a bit fun (which is all it is at present) do try it out, on the old PC.

Review By Roy Burton



*It really does look like an Amiga, even the prefs programs have a Workbench feel!*

## HTTP Resume

**Licence:** Freeware

**Available From:** Aminet,

<http://www.aminet.net/~aminet/Directory/comm/www>

Ever found it annoying when you're in the middle of a download from a website or server, and you get disconnected by your ISP? Or when it's a large file you want to download and you don't want to be online the whole time to download it? Then HTTPResume is the answer.

All you do is enter the URL of the website or server you want to download from, with the file (e.g. <http://www.website.com/file.lha>), which

goes in the first box, the second box is where the file name goes, but if you already have the file name in the URL address, then you will be able to double click on the next box and the file name will automatically come up, or if you have already have an un-complete download, then you can click on the "F" button, where a file requester will appear, and you will be able to select your unfinished download, and press start. It's that simple!

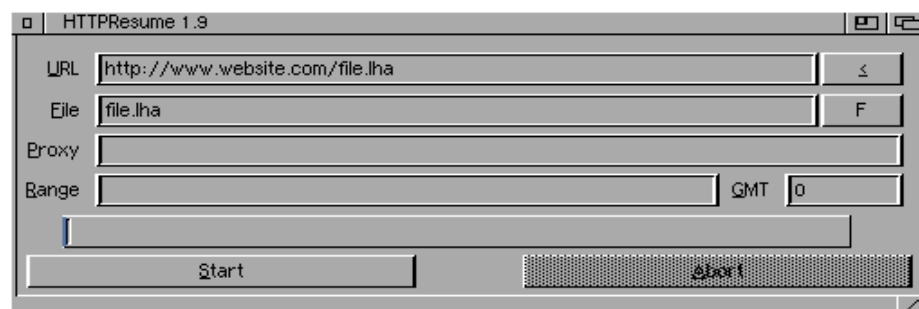
You will also notice a bar above the start and abort buttons, which is where the progress bars go. It's two progress bars in one, one shows how much you have

downloaded in the current session, and the other shows how much has been downloaded in total.

The most important thing to remember is to make sure you have the "Auto Resume" menu item ticked. There are loads of options in the menus to cater for different downloads, as well as to suit your needs, such as the ability to do various checks of a download and even to add sounds.

HTTPResume is definitely a must for anyone who does regular and large downloads, what's more it's totally free!

Review By Elliott Bird



### Want More?

HTTPResume's author has made an enhanced version of the program which is called Charon. The program has more features and a MUI interface and is now shareware, check out the demo at: <http://tesla.rcub.bg.ac.yu/~antony/>

## APDF

By: Emmanuel Lesueur

**License:** GPL (Open Source)

**Available From:** Aminet

<http://www.aminet.net/~aminet>

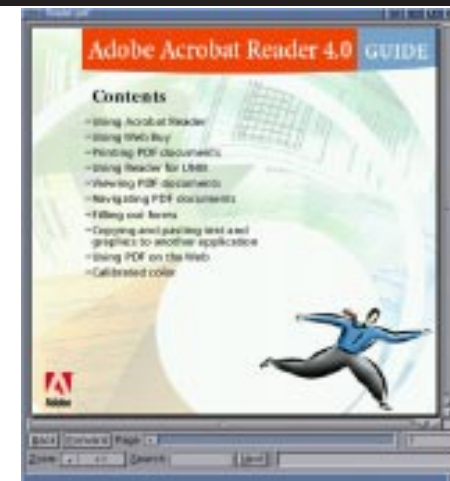
Directory gfx/show

The Portable Document Format is a document file format designed by Adobe, and based on their PostScript page description language that is used to drive high-end printers and publishing equipment. PDF has become a popular Internet format because, unlike a webpage, it allows the publisher to present a document as it was designed complete with fonts, graphics and page layouts. The document displayed is as close as possible to the original, given the limitations of the computer and software used to display the PDF. PDF files can also be printed, and give a very high quality output. PDF is most commonly used to provide electronic versions of printed documents so you will commonly find user manuals for all types of products, specifications, plans and forms in PDF. PDF files can usually be identified by a .pdf extension, also look out for the "Get Adobe Acrobat" banner on websites, Acrobat is Adobe's PDF reader which is available for several platforms (not Amiga needless to say) so this is a sure sign that PDF files are near by.

There are several open source utilities available on Unix like systems which can display PDF files and over time several of these have been ported to the Amiga, most of these ports retained their Unix heritage and are less than easy to



*Antialiasing means fonts and diagrams render very smoothly even at screen resolutions.*



*In PDF documents like this one you can click on linked phrases to jump to another page, document or URL.*

use. Then a couple of years ago Emmanuel Lesueur brought out Apdf, although this utility is based on the xpdf rendering engine Emmanuel has given it a MUI interface so Apdf feels like a real Amiga program.

PDF documents expect a set of PostScript fonts to be available on the system, any special fonts are embedded in the document itself. One of the archives in the Apdf distribution on Aminet contains these base fonts and the preferences file supplied is set-up to use them. In the most recent versions of Apdf display quality has been increased considerably through the addition of optional antialiasing on fonts, lines and fills. AA smooths out "jaggies" in the screen display by smoothing sharp edges with intermediate toned pixels this is particularly noticeable on large fonts, diagonals and curves.

All the basic functions you need to comfortably view a PDF document are available, you can scroll through or jump to a particular page, go back and forward through the page history and zoom in and out. A search facility searches the document for a word or phrase you enter and you can select text on the page and copy it to the clipboard. Although Apdf does not have page thumbnail or index lists (which are available in Acrobat) it does support links in PDF files. There are three types of link: local links (jump to a different page of the same document), document links (jump to a page in a different PDF document) and Internet links which open the

URL in the browser you choose in Apdf's settings. For the ultimate convenience a special version is supplied as a Voyager plug-in so you can view PDF documents linked from a web page directly within Voyager, other browsers can be set-up to run the Apdf separately when you click on a PDF file.

Viewing PDF documents is a memory and processor intensive business, Apdf has various versions for different 68k processors and supports PowerPC using PowerUP (and WarpUP using Frank Wille's ppc.library emulation) to make the best of your system. It also supports a caching system so it does not need to load the entire document at once to minimise memory usage. To print from Apdf you need a Postscript printer or software interpreter such as GhostScript which is included with TurboPrint 7, if this is available printing is very high quality with smooth scalable fonts and diagrams.

Over the years I've found Apdf to be very widely compatible with PDF files found on the Internet and this latest version seems better than ever coping with the couple of documents which did not display properly in an earlier version. I have tried documents from large corporations such as Sony, government forms and many others with good results. There are a few PDF features which Apdf does not support such as fill-in forms and password protected documents but I haven't found these commonly used. By default Apdf cannot read encrypted PDF documents but this can be overcome by downloading a separate decryption module, which is distributed in this way due to French laws on exporting cryptography software.

A very polished utility which is essential for any on-line Amigan.

Review by Robert Williams



# Top Tips

Robert Williams has two tips that are rather more detailed than usual this issue.

## Batteries

Any Amiga with a real time clock (one that keeps the correct time and date even when the computer is switched off), must have a battery which powers the clock circuit while the Amiga is turned off thus retaining the time. The A500plus, A600, A1500/2000, A3000 and A4000 machines all have the battery and clock circuit built in on the motherboard. Other Amigas such as the A500 and A1200 often have a real time clock added, it is usually one of the features of a memory upgrade or accelerator.

After a few years the type of battery fitted to many Amigas can leak and damage the circuit board it is attached to so it is vital to know if your battery is the dangerous type and if it is to check it regularly for signs of leakage. This may sound like scare mongering but as our Amigas get older leaking batteries are becoming very common. So let's first look at the two types of battery commonly used on Amigas and expansion cards:

### Nickel Cadmium (NiCd)

This type of battery is rechargeable, it is charged while the Amiga is switched on and provides power when the computer is switched off. As this type of battery ages it can begin to leak, this can be seen as a white powdery residue which forms on the ends of the battery and works its way down the legs to the PCB (Printed Circuit Board). The material which leaks out is alkaline and is corrosive, if left over time it will slowly eat away at the PCB and particularly the copper tracks eventually leading to open circuits. This damage can cause malfunctions or complete failure and is difficult to repair particularly if it has been left to spread down through the layers of the PCB.

All Amigas with a battery on the motherboard except the very last A4000s (motherboard revision D) have a NiCd battery. The battery is a barrel shaped device about 1.5cm long, usually red or blue in colour, soldered directly to the motherboard. As all Amigas with an on board battery (except the rare A4000T) are now seven or more years old it is likely that the battery will be leaking if it has not been replaced fairly recently (machines that are

used very regularly seem to fair better than those which have been stored or are used rarely). So if you have one of these machines be sure to check soon or you may find your machine suddenly fails.

### Lithium

These batteries are not rechargeable, they are usually in the form of a single coin cell and have the great advantage over NiCds that they very rarely leak so even if your lithium battery is dead you don't need to rush to replace it. As standard Lithium cells were only used on the revision D A4000s (and possibly A4000Ts but I don't know for sure) but they can also be found powering the real time clocks on many third party RAM cards and accelerators.

### Removing Leaking NiCds

If you find the NiCd battery on your motherboard or accelerator is leaking it is important to remove it and any residue as soon as possible, hopefully you will catch it before any damage occurs. If you are experienced with a soldering iron removing the battery shouldn't be too difficult a job. If you aren't up to de-soldering and can't get the job done professionally, it is possible to snip through the legs of most batteries with cutters or you could just rock the battery back and fourth until the legs fatigue and break. Whatever you do be very careful not to damage other components near by or the motherboard itself. When the battery is out of the way then



If your battery looks like this, remove it ASAP.



The "safer" lithium coin cell fitted to an A4000 rev. D motherboard.

remove all the residue from the board, you may need to wash it away with a little water or even a mildly acidic solution (to neutralise the alkaline). It is probably wise to protect your skin and clothes from the corrosive residue while doing this! When the board is clean be sure it is absolutely dry before re-installing it in the Amiga and testing.

### Replacing Batteries

Once your dead battery has been removed you will probably want to replace it. If your board originally had a NiCd you might want to think about replacing it with a Nickel Metal Hydride (NiMH) alternative, these do the same job but leak much less readily than NiCds, contain less toxic chemicals and have better performance. If you live in the UK a suitable replacement battery is available from Maplin Electronics who have shops, catalogue, and on-line ordering facilities. Only one type of battery was used on all Amigas with a NiCd on the motherboard and the direct replacement is Maplin part number is BN22Y (3.6V 70mAh PCB Mount NiMH battery).

For revision D A4000 machines which have the Lithium coin cell finding a replacement is more difficult, the cells are widely available but I can't find any with the PCB mounting legs required. Fortunately this motherboard also has an external battery connector (at the front left marked EXT BAT) where you can attach a 3.6V lithium battery pack. These are available from Maplin, part number QE51F (3.6V Lithium Pack) but are quite expensive at £12.99 plus VAT.

Many different batteries are used on other Amiga products such as accelerators and RAM cards. Generally lithium types are silver coin cells and have the word "LITHIUM" etched into their casing while NiCd's often have a plastic casing. When looking for a replacement battery be careful to choose one rated at the same voltage and ensure it is of the same type. Do not replace a rechargeable battery like a NiCd with one not designed for recharging like a lithium cell (the lithium cell could explode) and vice versa (a NiCd or NiMH battery will not last long if it isn't charged)! The actual shape of the battery is not important, if you can't find an exact match

you could always attach an appropriate battery to the PCB with wires. Again if you don't trust yourself to fit the new battery get a pro to do it for you, anyone used to working on PCBs, for instance a TV repair technician, should be able to do the job if you provide the parts.

WARNING: You undertake the work described above at your own risk, if you are at all unsure please have a professional carry out the job. Neither the author nor Clubbed magazine can be held responsible for damage to your Amiga or more importantly to yourself.

## Printing from IBrowse 2

Printing support has always been one of the weak points of Amiga web browsers, the best most can manage is either a plain text print of the page or a graphical dump which keeps all the graphics but is blocky. Most browsers on other platforms render the text on the web page with scalable fonts and retain the graphics and page layouts making the print better looking not to mention more comfortable to read!

With IBrowse 2.1 Amiga users now have the opportunity to get this kind of print quality however it is only available when printing PostScript and takes a bit of setting up. If you don't have a true PostScript printer (and most people don't, PS printers tend to be fairly high-end lasers) then don't worry, we'll cover printing Postscript to a normal printer a bit later on.

### Configuring Postscript Printing.

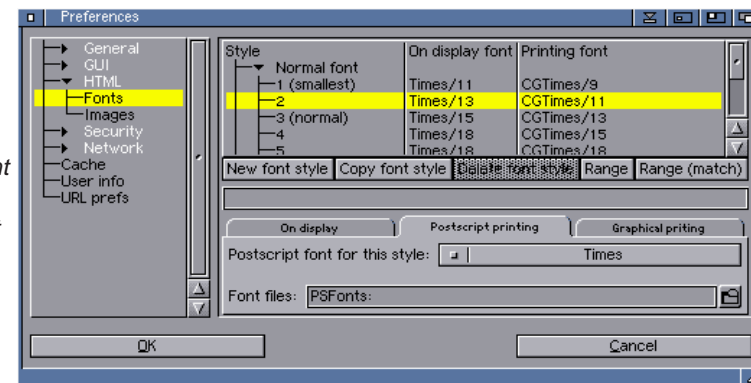
For Postscript printing you need to have three Postscript font families installed on your Amiga, these can be downloaded from the Adobe (inventors of Postscript) FTP site. Go to the following URL with your web browser or FTP client:

<ftp://ftp.adobe.com/pub/adobe/type/win/all/afmfiles/base17> (all one line)

In this directory you will find several sub-directories, go into .1, .2 and .4 and download all the files in each. Copy these files into a directory on your hard disk, it can be anywhere you like, and rename the files as follows:

```
com____.afm as courier.afm
cob____.afm as courier-bold.afm
coo____.afm as courier-oblique.afm
cobo____.afm as
courier-boldoblique.afm
hv____.afm as helevita.afm
hvb____.afm as helevicta-bold.afm
hvo____.afm as helevicta-oblique.afm
hvbo____.afm as
helevicta-boldoblique.afm
tir____.afm as times-roman.afm
tib____.afm as times-bold.afm
tii____.afm as times-italic.afm
tibi____.afm as times-bolditalic.afm
```

### Setting IBrowse's Font Preferences for Postscript printing.



Now start IBrowse and open the Preferences window by choosing "Settings..." from the "Preferences" menu, in the list on the left hand side double click on "HTML" then click on "Fonts". In the fonts list on the right of the requester click on one of the headings, for example "Normal font". Click on the Postscript printing tab and use the "Font files:" requester button to select the fonts directory you made earlier. Then change the "Postscript font for this style:" cycle gadget to the font you would like to use for this type of text. Go through each font style in the list until they are all configured, as a hint the Normal font would usually be Times or Helvetica and the Fixed width font Courier. When you have finished click OK then save your settings using the "Preferences/Save settings" menu item.

If you're lucky enough to have a Postscript printer you can now print the currently displayed web page by choosing "Print" from the "Document" menu. In the Print options requester set the Print mode to "Postscript", the Destination to "Printer" and click "Print".

### Using GhostScript and Turbo Print 7

If you don't have a Postscript printer you can use a software interpreter such as the open source GhostScript to turn the PS code produced by IBrowse into something that can be printed by normal printers. If you have TurboPrint 7 this is very easy to do because this release of TurboPrint includes GhostScript and will print any PostScript file which is sent to the PS: device. So to print the current web page just set the Destination to "Custom" and enter "PS:" in the text box then clicking print should print the page via Ghostscript and TurboPrint without any further intervention. As the page prints you may notice a couple of problems:

### Mono?

IBrowse Postscript printing only works in greyscale so you won't see nice colour images, as far as I am aware there is no way around this limitation and depending

on your use for the print it may or may not be a big problem. Personally I am usually interested in the text of pages I print so it doesn't worry me much.

### Too Big?

Depending on the page you print you may find that IBrowse has cut off the right edge of the content. This only occurs with sites which use fixed width tables or that have a minimum width of over about 700 pixels. The cropping occurs because IBrowse has no facility to scale the print to fit on the page. Fortunately there is a work-around for this problem using TurboPrint's PostScript scaling facilities to fit the information on the page. First we need to tell IBrowse to print onto a bigger page size (which we will then scale down), in this case I'll use A3. IBrowse uses the Workbench PostScript preferences and thoughtfully provides a button to open it in the Print window. In PostScript Printer Preferences change Paper Format to "Custom" and enter Paper Width "11.69" and Paper Height 16.5, click the Use button. Now we'll tell TurboPrint to scale the bigger page back down to fit on A4, open the TurboPrefs program and select the PS tab. In the PS Position section enter "70" in the ZoomX and ZoomY boxes, this is the percentage to scale the print to, click Use. Now print as before and you should find your print will now fit on the paper.

### Printing Fails

Occasionally IBrowse will fail to print a page and a PostScript error will appear, this is usually due to large graphics on the page which seem to cause IBrowse to produce bad Postscript. To get these pages to print you can turn off images (select "Preferences/Image loading/Delayed"), reload the page and then print again obviously with no images this time, again whether this will be a big deal is entirely down to the type of page you're printing.

For text prints I find IBrowse's Postscript printing the best of all the Amiga browsers, generally it does a good job with layout and graphics too. If a new version of IBrowse ever sees the light of day hopefully some of the (really fairly minor)



# Samba Printing

By Robert Williams

I was going to write a tutorial on setting up Samba to accompany the networking feature in this issue of Clubbed. However while researching the article I found that <http://www.amigasamba.org/> has a for more detailed tutorial than I could hope to fit in these pages. The AmigaSamba site doesn't yet cover printing across the network with Samba so I have decided to concentrate on that particular aspect in this article.

With Samba you can allow other users on the network to print to the printer attached to your Amiga and you can also print from your Amiga applications to printers attached to other computers on the network. In this article I will explain how both aspects are configured. In addition to my Amiga the other machine on my network is a PC running Windows 98SE. The same settings on the Amiga will apply whatever OS is running on the other machines on your network. If you want to print to or from a machine running a different OS then you will need to check the Samba documentation for that OS, in general it should be similar to setting up the Amiga but there will be OS specific differences.

NOTE: This tutorial sets up a Samba printer with no security, similarly the [amigasamba.org](http://www.amigasamba.org/) tutorial includes no security. On a home network having usernames and passwords for everything is a bit over the top although you can always password protect particular shares or printers if you wish. If your network is connected to the Internet it is important that you setup a firewall on the machine that is a gateway to the Internet or this insecure system could be exposed to the outside world.

## Overview of Samba Printing

Printing across the network with Samba is actually quite simple, all the data that would normally be sent directly to the printer (via a port) is

redirected across the network and collected into a file which is stored in a spool directory on the machine with the printer connected. When the data has arrived it is sent to the printer and thus printed out. This process means that you can't suddenly start printing from your Amiga to an unsupported printer just because it's connected to another machine whose OS does have a driver, the printer only receives the raw data sent by the source computer. Likewise you will still need a print enhancement package such as TurboPrint or Studio to get good results from a modern inkjet printer. The same also holds if you're printing from a different platform to your Amiga, you'll need a suitable driver installed for the printer on that platform.

As I mentioned in this example I have a PC running Windows 98SE and my Amiga 3000 running OS 3.9, both machines are configured on the network and Samba is running with file sharing working in both directions. The PC has a Canon BJC240C attached to its parallel port and the Amiga has an HP Deskjet 1120C on a Hypercom IIIZ parallel port. Both machines have the printers installed and correctly configured, you will notice that Amiga and Windows drivers are available for both printers, I'm using Turbo Print 7 on the Amiga.

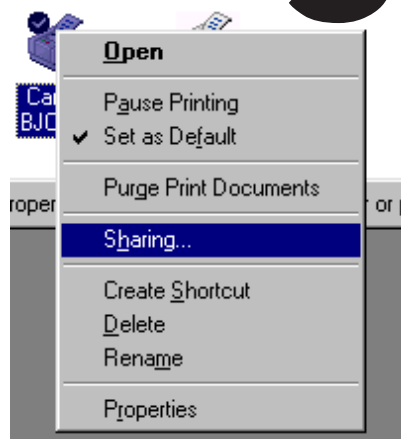
## Printing from the Amiga to the PC Sharing the printer

Before you can access the printer on the Windows machine from another computer on the network you need to make it available on the network, this is called "sharing" in Windows terminology. Assuming you have the printer installed and working under windows follow these steps:

Open the Printers window by choosing Settings/Printers from the Start menu.

In the Printers window find the icon for the printer you wish to share, click

Sharing a printer in Windows.



on it with the right mouse button and choose "sharing..." from the pop-up menu. This should open the printer's Properties window on the "Sharing" tab, to share the printer click on the "Shared As" radio button then edit the share name (which should be all upper case and have no spaces). If you wish you can enter a comment and a password needed to access this printer. Make a note of the share name you have assigned to the printer and the name of this computer on the network, for example my PC is called RIMMER and the printer is CANON240.

Click Ok when you're happy with the settings, back in the Printers window a hand should appear underneath the icon for the printer indicating that it is shared.

Back to the Amiga now, when we print something on the Amiga we need to capture the print data and then instruct Samba to send it



across the network for us. To do this we are going to use two utilities, CMD (which is included with the AmigaOS) to capture the print data and SPS which is an AREXX script written by Robert Wilson especially designed to automate printing with Samba.

Before we can set any of this up we need to install an appropriate driver for the remote printer on the Amiga, this can be a standard Workbench driver installed in the Devs:Printers drawer or a TurboPrint driver. Which ever it is use the Printer or TurboPrint preferences program to ensure that the correct driver is selected and it is printing to the Amiga's built-in parallel port. In TurboPrint you can create a separate configuration for the remote printer making it easy to swap back to a local printer at any time. It is important to select the internal parallel port because SPS configures the CMD utility captures all data sent to that port, if you choose to print to another port it will not capture the data. If you need to use your internal parallel port you can still do so and just run SPS when it is needed (it would also be possible to configure SPS to use a different port but this article is long enough already!).

## SPS

With that explanation out of the way it's time to install SPS, so download the sps.lha archive from Aminet, it's in the comm/net directory.

De-crunch the SPS archive and copy the sps.rexx file it contains into your S: directory or any other directory on the path. Check that you have the following libraries in your libs: directory: rexxtricks.library, reqtools.library, rexxreqtools.library and rexxsupport.library (they can all be found on Aminet if you don't have them). Now we need to set the options for the sps.rexx script, this is done by editing variables at the start of the script. Load the script into an editor of your choice, for example EditPad or even Ed and change the lines as follows:

spooldir = 'Scratch:Temp/Spools/'

This is the directory on the Amiga where the print data files will be held until they are sent to the

remote printer across the network, this directory must be dedicated to spool files and contain no other files (otherwise sps will try to send them to the printer!). You must specify the full path to the directory and end it in either a ":" or "/".

username = "  
password = "

If the remote printer is username and password protected then specify them here enclosed in single quotes "", if no username and password are required use two single quotes with no space between.

printer = '\\RIMMER\CANON240'

Specify the server and the printer in the form of \\SERVER\PRINTER, note that on Windows systems the names must be upper case.

setcmd = 1

If you wish SPS to set the CMD tooltypes set this to 1, if not set it to 0, this is useful if you run CMD in your WbStartup, however you must ensure SPS runs before CMD, for example by placing it in your user-startup.

runcmd = 1

If you would rather SPS started CMD automatically when it is run set this to 1, otherwise set 0. Having CMD run by SPS (runcmd=1) is probably the simplest option for most users and allows you to start network printing as and when you need it.

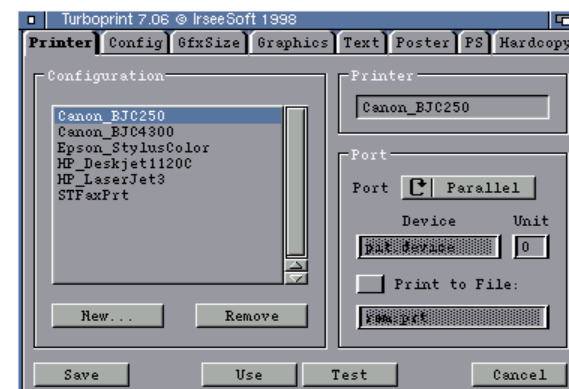
cmdpath = 'sys:tools/cmd'

Change this to point to the CMD command, the above location is the standard on a new Workbench installation. Change this to "cmdpath = 'sys:wbstartup/cmd'" if CMD is in your WbStartup drawer.

Tip: By default sps comes setup to look for CMD in the sys:utilities/drawer, this is not the standard location for the command, unless you have moved CMD change the sps script to look in the tools drawer as shown above.

pubscreen = 'Workbench'

If you would prefer any SPS requesters to open on another public screen enter its name between single quotes here.



Multiple printer configurations in Turbo Print.

SPS needs to use the smbclient command and expects to find it in the amitcp:samba/bin/ directory, if your Samba installation isn't located directly inside your amitcp: assign this won't work. There are two ways around this, firstly you can make an AmiTCP: assign that points to the directory above the Samba directory or you can change line 86 of sps.rexx to point to the location of the samba directory on your system. As I have a samba: assign I changed the line to start with "samba:bin/smbclient".

When you've finished editing the sps.rexx file save it and close down the editor. Now we're ready to run SPS, initially let's try it from a shell, just type "rx sps.rexx" and press Return, if you didn't put the sps.rexx in a directory on your path you'll need to specify the complete path. SPS doesn't detach itself so you should be left with a blank line in the shell, if there are any problems you will get an error message in a requester or on the command line, if this happens double check the edits you made to the script above. Assuming there are no errors we can try printing something, make sure the remote computer with the printer is switched on and the printer is ready (although the print should spool successfully even if the printer is off-line) now try printing from any application that uses the standard Workbench printer drivers or TurboPrint. If you look in the spool directory you set up there should be a files named sps.n (where n is a number) which grows in size as the job is printed (you may need to re-read/update the directory display to see this). A few seconds after the application has finished printing the remote printer should start working... and that's about all there is to it!



Well I lied a little in my last comment, but the only thing left to do is to decide how you're going to run SPS. If you have a printer directly connected to your Amiga you may only want to run SPS occasionally, in that case you could either run it from a shell or create a script with an icon using IconX. If you need help doing this take a look at the tutorial on page 41 of Clubbed issue 7 but use just use the command "run rx sps.rexx" as only line in the script. If you'd like SPS to run every time you put your TCP/IP stack goes on-line you could add it to the On-line Event in your TCP/IP stack. If you installed Samba following the amigasamba.org tutorial then you will already have a script running from the On-line event, you can add a line to run SPS to the end of this script:

```
run >NIL: rx sps.rexx
```

Remember that before you try to print anything you must choose the correct printer driver, unfortunately I don't know of any way to automate this process, so you'll need to do it manually.

If your Amiga has its TCP/IP stack running and connected to the network at all times then you may want to have SPS running all the time. To do this you can run SPS in your user-startup, as it is an AREXX program you must ensure that RexxMast is run first. In this case you can save your printer settings for the remote printer permanently.

### Limitations

Printing from the Amiga to the PC works very well and unlike the other way round you can print several documents one after the other without causing a problem, the PC will just queue them up to print. The only problem I had was when printing from Final Writer, I got a page with a few garbage characters printed between each good page. As this doesn't happen with any other application I am tempted to think it is some problem with Final Writer and the Turbo Print driver for the Canon BJC 240 I used, maybe I didn't have it correctly configured. I haven't had the chance to try the printer connected directly so it may not be Samba related at all.

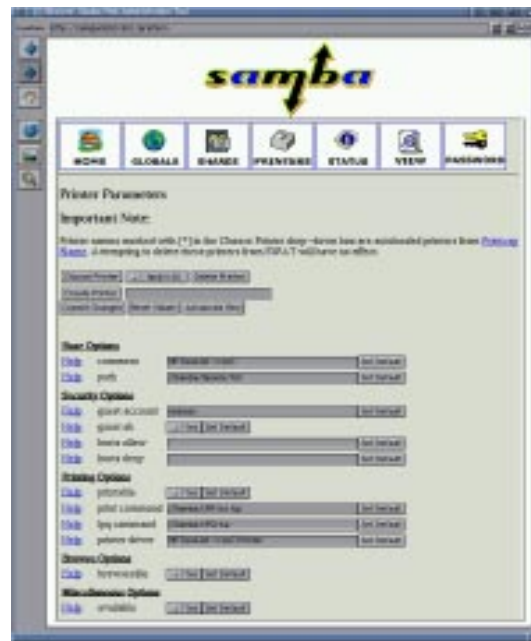
## Printing from the PC to the Amiga

### Creating a Printer Share on the Amiga

Before we can configure Samba on the Amiga to share a printer we need to prepare two script files, one which will copy the spool file received from the remote computer to the printer port of our choice and another that will return print queue information if it is requested. Two AmigaDOS scripts written by Gian Maria Calzolari which do these jobs are available on Aminet in the archive comm/net/LPx.lha. If you download this and de-crunch it you will find the scripts, one called LPR and the other LPQ. Copy these into your Samba: directory (if you don't have a Samba: directory now would be a good time to add one to your user-startup) and then edit the LPR script as follows to match your system (the LPQ script does not need editing):

### LPR

Change line 35 and 36 to point to the directory where you wish to keep your Spool files, if you wish to use the default from the scripts leave these lines unedited and create a drawer called Spools inside your Samba: directory. Be aware that Spool file can be very large, especially if you intend to do high resolution photo printing across the network, so make sure there's plenty of space on the partition holding the spool files. If your printer is attached to any port other than the built-in parallel port you will need a DOSDriver so that port can be accessed as a DOS device, some I/O cards such as the Multiface come with such a DOSDriver, if yours does not then you can use porthandler.lha by the prolific Stephan Rupprecht (Aminet, util/sys) which has a new



Settings for the new share in SWAT.

l:port-handler and example DOSDrivers for Hypercom and IOBlix I/O cards. When the DOSDriver is set up edit line 35 of the LPR file so the spool file is copied to the correct port. For example the DOSDriver for the parallel port on my Hypercom ZIII is called HCPAR00: so my line 35 reads:

```
Copy >>T:LPR.log
Samba:Spools/{PName}/{SFile}
HCPAR00:
```

When you're done save the LPR file.

Adding the new printer to Samba

As you will have seen if you followed the amigasamba.org tutorial there are two ways to configure Samba, you can either edit the Samba:lib/smb.cfg file manually or use SWAT (Samba Web Administration Tool) where you can set up Samba using your favourite web browser. Here we'll use SWAT as it is more friendly than editing a text file so fire up your favourite web browser and go to the following URL "http://localhost:901". After a few seconds a web page should appear with a Samba logo at the top, this is SWAT. Click on the Printers icon at the top and the printers page should open. We're going to add a new printer so type the share name you want to give the printer (I used HPDJ1120) into the text box at the bottom of the page and click "Create Printer". The options for the new printer appear, we need to access some of the Advanced settings so

click on the "Advanced View" button.

Now fill in the web form as follows:

comment A description of the printer, I used "HP Deskjet 1120C"

path This is the path to your spool directory, it must be the same as the one you specified in the LPR file, the default is "/Samba/Spools/%s". Note that this path must be in Unix notation, the first name after the leading "/" is the AmigaDOS device name, in this case "Samba:".

guest account Set this to the name of the guest account you created during installation, if you followed the amigasamba.org tutorial this should be "pcguest".

guest OK Unless you want only named users to be able to print to your printer set this to Yes.

print command  
"/Samba/LPR %s %p"

lpq command  
"/Samba/LPQ %p"

The above two commands assume you have installed the LPR and LPQ scripts in the Samba: drawer as I described above, if you're interested %s is replaced by the name of the spool file and %p is replaced by the name of the printer.

printer driver Blank this text box or enter the name of the Windows printer driver (you won't know this until you have installed the printer driver under windows, when you have it is on the "Details" tab of the printer's properties window), do not leave this set to NULL which is the default as I found this will stopped printing working from my Windows machine (most frustrating!).

All the other fields can be left at their default values so you can now click the "Commit Changes" button at the top of the page to save the settings.

We now need to make a directory inside the Spools directory we specified to hold the spool files for this printer, this needs to be named exactly the same as the share name, for example I created a directory called HPDJ1120 in my Samba:Spools directory.

With that done our printer share is now ready for testing, the next thing we need to do is to let Windows know it exists, over to the PC.

### Connecting to a shared printer from Windows

Open the "Network Neighbourhood" icon on the Windows desktop then find the icon for representing the computer with the printer attached (in my case the Amiga3000 icon) and double click it. A new window should open containing icons for any shares you have created plus, hopefully, an icon for your shared printer.

Right click on the printer icon and choose "Install..." from the pop-up menu. Window's "Add Printer" wizard will now appear to guide you though the process of installing the printer. On the first page select whether you would like to be able to print from old MSDOS applications (I believe this will map the network printer to a "hardware" port such as LPT1) and click "Next". On the next page you need to select a driver, either choose one of the drivers provided with Windows from the list or click "Have Disk..." if you have an install disk or have downloaded a driver from the manufacturer. If you choose "Have Disk" use the "Browse..." button in the "Install from Disk" dialogue box to locate the install file which will be called "something.inf", for my HP Deskjet 1120C it was called "DJ1120C.inf".

NOTE: If your printer driver is on CD-ROM Windows may automatically try to run the installation again when you insert the CD, be sure to cancel this installation and continue with the one we started above.

Now the you may be prompted to choose the appropriate driver, do so and click Next. On the next page enter a name for the printer (this will be the name used in Windows print dialogue boxes, not the share name) and indicate whether you want this to be the default Windows printer. Finally click Finish.

You may now be asked some more questions which are specific to the drivers you are installing, run through this installation until it is successfully completed. Some installations may give error mes-

sages because they expect the printer to be directly connected, you can safely ignore these errors.

To check the installation has been successful open the Printers window (by choosing Start/Settings/Printers), right click on the new printer icon and choose "Properties..." from the pop-up menu. In the Properties window choose the "Details" tab, you should see the name of the computer and printer share in the "Print to the following port:" text box (I see \\Amiga3000\HPDJ1120). If this is correct choose the General tab, make sure the remote printer is on-line, then click the "Print Test Page" button. In a few seconds the page should start to print on the remote printer.

### Limitations

While this set up works very well there are a couple of limitations you should be aware of. The first is that you can only print one document at a time to the Amiga printer, if you try to print another before the first has finished you will get an error message on the PC and the printer will be put into "Work Off-line" mode. If this happens just wait for the first print to finish and then right click on the printer in the Start/Settings/Printers window and un-check the "Work Off-line" option in the pop-up menu. One other problem you may encounter is that spool files will get left behind in your Spools directory on the Amiga if either machine crashes during a print, you can just delete these files but be aware that they may occur and can be very large.

### Conclusion

I hope this tutorial will prove useful, as I said at the beginning Samba's printing system isn't really at all complex but there are so many settings that getting everything set just right does take a bit of doing. But despite, or maybe because of, this complexity I got real buzz when my first network print worked (then again perhaps that's just me) anyway good luck and may the SWAT be with you!



Create a new print share using SWAT.



# Draw Studio

## Tutorial

Robert Williams takes us through a simple project combining bitmap graphics and structured elements.

If you've read my DrawStudio review earlier in this issue you'll know I'm a fan of the program, in particular the way it can be used to combine bitmap graphics and the structured objects which are its speciality. DrawStudio also has lots of cool features like translucent colours which have never been seen in an Amiga structured drawing program before (or sadly since).

### What's it all About?

I'm an avid radio listener (as you ask (or even if you don't) I listen to BBC Radio 4 mostly for the great comedy (much of which later moves to TV) and drama) and I often record programmes to listen to later. This has left me with a large and rather motley collection of cassettes, most with indecipherable notes scribbled on them. So I decided to design a standard cassette inlay for each type of programme so my collection would look a bit better. I knew I wouldn't be able to get on the computer to type out a new insert each time I recorded something so I decided on a design with a large area for writing in the programme name. Anyway enough of the background here's how I went about designing one of the inlays in DrawStudio, you could apply the same techniques to CD covers or in fact any DrawStudio project.

### Oval Circles?

If your display looks distorted (circles look like ellipses and squares are rectangular) you probably need to adjust the Monitor DPI on the Display page of DrawStudio's preferences (Settings/Prefs...). To calculate the correct X and Y DPI measure your monitor's visible display from side to side and top to bottom in inches. The X DPI is the horizontal resolution divided by the horizontal size and the Y DPI is the same but for the vertical measurements. For example my 17" monitor's visible display is 12.75 by 9.5 inches and I run DrawStudio at 1024 by 768 resolution. There for my X DPI is  $1024 / 12.75 = 80$  and my Y DPI is  $768 / 9.5 = 81$ .

If you want to follow this tutorial exactly as I have written it you will need to make sure your DrawStudio measurement units are set the same as mine, in millimetres. Open the Preferences window by choosing the "Settings/Prefs..." menu item. The Prefs window has several pages listed down the left hand side, we only need to look at the "Misc" page, so click on that. Now on the Misc page change the "Measuring Units" cycle gadget to "Millimetres". Click OK to close the window, if you want to save this setting for future sessions select the "Settings/Save settings" menu item.

The final setting you may want to check is for the Display, open the Display Settings requester by choosing "Settings/Display..." from the menus. Here you choose the screenmode that DrawStudio runs on and the number of colours used to render the page buffer (which is independent to the screenmode). If you have a reasonable amount of memory (say 16Mb or more) you should be able to choose a 24bit page buffer, this will allow all DrawStudio's effects to be shown on screen. If you don't have a graphics card choose a screenmode with the largest number of colours you can without unacceptable slow-down, I would try 256 first as it will give the best results if you can live with the re-draw speed. If you're lucky enough to own a graphics card then definitely choose a 16 or 24bit screenmode, then DrawStudio's display will be full quality and undithered.

**TIP:** If you find DrawStudio locks up or the display gets corrupted your problem may be one of the MUI settings, "Refresh" on the "Windows" page of MUI preference program must be set to "Smart". To check and change this setting choose "MUI settings..." from DrawStudio's Settings menu, the MUI settings for DrawStudio will then appear on the Workbench screen.

### Let's Get Going Already!

Take the printed inlay out of an audio cassette case and unfold it, you will find it consists of at least three and probably more panels. There's a flap,

the spine where the title is normally printed and the front cover, usually there are also one or more panels folded inside the front cover. For this tape case I want to have one panel folded inside so that's four in total. Now I'm going to measure the inlay of an existing tape to make sure I get the size of my replacement just right. Firstly the cover is 102mm high so according to my measurements the panels four are:

Flap:	16mm x 102mm
Spine:	12mm x 102mm
Cover:	65mm x 102mm
Inside:	60mm x 102mm

These measurements need to be reasonably accurate as a millimetre or two out and the inlay either won't fit in the case or it will be sloppy and fall out all the time!

### Preparation Over

If you haven't done so already fire up DrawStudio, it should start with a blank page ready to go. The first step at creating our design is to draw the outline of the inlay on to the DrawStudio page. Make sure the grid snap is switched on (the "Layout/Snap to Grid" menu item is checked) and set the grid to 5mm (using the "Layout/Grid..." requester). Click on the rectangle tool in the tool bar, click and hold the left mouse button where you want the top left hand corner of the rectangle to start and drag down to the bottom right, watch the dx (dimension X) and dy values shown in the Window's title bar and release them when they are as close as possible to the required size for the Flap panel, (which will be 15x100 because of the grid we set) then release the left mouse button and the rectangle is drawn on the page. Now to get the exact size we want, click on the pointer tool in the tool bar, then double

click on the outline of the rectangle, this will bring up the "Object specs" requester (you could also click once on the rectangle to select it and then choose "Object/Specs..." from the menus). In the specs requester enter the exact sizes you need in the Width (16) and Height (102) boxes and click OK, you should notice the rectangle get slightly larger. Now repeat the process until you have four rectangles with the sizes listed above, the result is shown in image 1. If you get in a muddle you can undo your actions using the "Edit/Undo" menu item or delete an object altogether by selecting it with the Pointer tool and pressing Del on the keyboard.

**TIP:** If pressing Del to delete doesn't work check you don't have "Caps Lock" on, for some reason Del only works with it off (a bug I believe but a pretty benign one!).

Next we need to move the panels together so they're arranged to form the inlay, because not all the edges align with the grid we will use DrawStudio's object snapping to do this. Make sure object snapping is activated by checking there is a check mark (a tick to you and me) next to the "Layout/Snap to object" menu item. Select the pointer tool and click on the outline of the spine rectangle (the 11mm wide one) to select it, 8 little squares called handles should appear around the edge. Click and drag on the outline but away from the handles to pick up the object, move it until the left hand edge nearly touches the right hand edge of the flap rectangle, as you get close notice the pointer changes, this indicates that if you release the button the edges of the objects will "snap" together and be neatly aligned. We want to align the top corners, when they get close the snap pointer shows an angle icon, this indicates a corner snap, when you get this release the mouse button and the two panels should snap neatly alongside each other. Now align the cover rectangle to the spine and the flap to the cover. Check the result looks something like image 2.

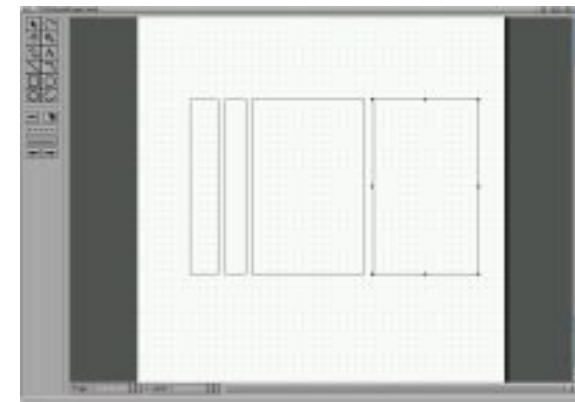
**TIP:** Now would be a good time to save using the "Project/Save" menu item, you might even like to save this outline as a template for other cassette inlays, if so use "Project/Save as..." and give the file a new name. If you like to give your files an extension which identifies their type the standard for DrawStudio is ".dsdr" (DrawStudio Drawing).

Let's give our tape case a background and while we're at it explore the image handling in DrawStudio (sounds like fun... maybe... oh go on, you know you want to...). First we need to add the bitmap to the DrawStudio project using the "Bitmaps" requester, open this now using the "View/Bitmaps..." menu item. Click "New" to add a new bitmap (image) and select the image you want to use in the file requester that appears, I am using an image I made myself for this project in ImageFX by compositing scans from several book covers. The image you have chosen will now appear in the "Project Bitmaps" list and DrawStudio displays a nice little preview (shown in image 3). We can now place this image into our project as many times as we like and DrawStudio will still only need to load it and store it on disk once which is quite cool, especially if your project contains large bitmap images. I'm going to use the same image repeated on all the panels of my inlay. Depending on the size, shape and type of image you're using you may choose to spread it once over all the panels or duplicate it as I have done.

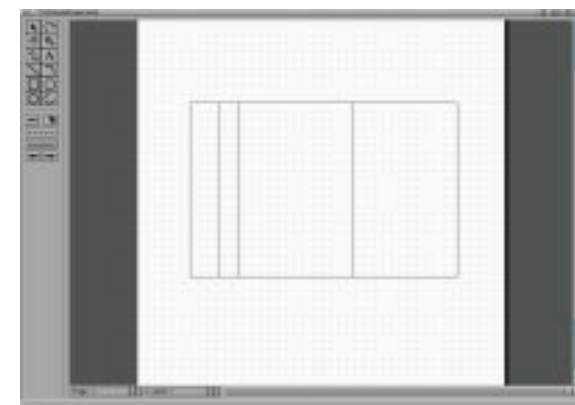
To place the image on the page click the "Place" button in the "Bitmap" requester. The "Bitmap" requester disappears and your pointer turns into a frame icon, move this to the top left hand corner of one of the rectangles, when the pointer turns into the corner snap icon click the left mouse button. To re-size the bitmap to fit the rectangle choose the pointer tool and ensure the image is selected, now drag its bottom right handle until it snaps onto the bottom right corner of the rectangle. Once the image is sized to your satisfaction we want to move it behind the rectangle so we can still see the panel outline, to do this just choose "Arrange/Send to back" from the "Object" menu. Repeat these steps until all the panels are filled with the image (or if you prefer size one image to cover all the panels) I covered both the flap and spine with one copy of my image so it didn't become too distorted (image 4).

That's the boring basics out of the way, now we can start adding some flash bits to make our tape case look the bees knees. First I want to split the case into three sections, one at the top for the type of programmes, a big section in the middle for the titles and another small section at the bottom which will balance the design.

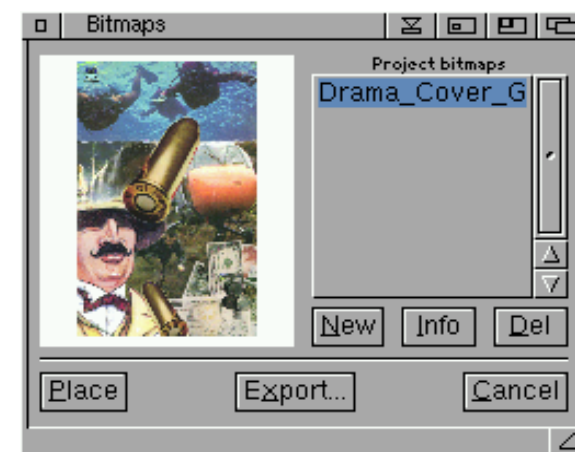
## Stepby Step..



1. Draw the boxes to define the panels.



2. Align the boxes using object snap.



3. Load the bitmap image.



4. Place and size the image in the panels



Start by drawing a line across all the panels, click the line tool in the tool bar then click and hold the left button with the pointer over the left most line of the flap about 20mm (four grid squares) down from the top. Keep the mouse button down and drag out the line to the right hand line of the inside panel, to keep the line horizontal you can hold the "Shift" key as you drag, when the pointer changes to the line snap icon release the button.

That line is still pretty dull, so we need to alter its appearance, choose the pointer tool and then pick "Attributes..." from the "Object" menu. The "Object attributes" requester appears, we will concentrate on the "Pen colour" settings on the left hand side. First however our line needs to be nice and thick, click on the "Line style" tab then choose the 6pt line in the left hand list (third from the bottom). Now back to the "Colours" tab (isn't it nice to see that word spelt "properly" in an application) we want to add a gradient to our line so click the "Gradient" radio button and then on "Edit...", both in the "Pen colour" section. The gradient we want isn't one of the sample ones that come with DrawStudio so click "New", an UnNamed gradient is added to the list, now click "Edit..." so we can change it to our preferences. First edit the "Gradient name" box to read "Gold Bar", next we tell DrawStudio which colours we want to use in the gradient by adding them to the "Gradient Colours" list. Scroll down the "Colours list" until you find "Deep Orange-Yellow" now either drag it across to the gradient list or click the "Add" button. Add "Pure Yellow" and another "Deep Orange-Yellow" to the list in the same way. If you need to you can rearrange the "Gradient colours" list by dragging and dropping the colours within the list, a dotted line shows you where a colour will be dropped. To get the shading effect we want change the "Speed" cycle gadget to accelerating, you can see this offsets the gradient and will make our bar look as if light is shining on it from above, the finished settings are shown in image 5. That's your first custom gradient created, just OK the requesters until you are left with just the main DrawStudio window and admire your handy work, it should look like image 6.

While our bar looks pretty good it is still rather flat, as our imaginary light source is coming from above the bar would naturally cast a shadow below it... let's go to work! This time we'll draw a box and fill with a transparent gradient. Choose the rectangle tool and

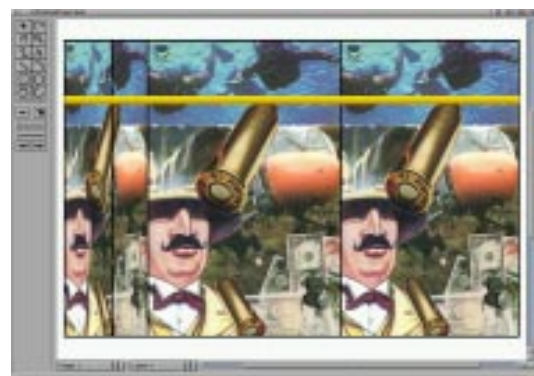
draw a box starting from the start point of the line to the right hand edge of the inlay, make the box 5mm deep. Now select the pointer tool and make sure the box is selected then choose "Object/Attributes...". For a transparent gradient we need to mix up a transparent colour, on the "Fill colour" (right hand) side of the "Object attributes" requester select the "Solid" radio button then click "Edit..." this opens the "Colour list" window. Here click "New" and then "Edit..." just as we did to create a new gradient earlier. Call this colour "100% Transparent" and drag the "Opacity" slider (Opacity is the opposite of transparency) down to 0% (I know this seems a bit confusing but I think most people are more familiar with transparency and even the colours that come with DrawStudio are referred to as "Translucent" so there you go), OK the "Edit colour" and "Colour list" windows. Now we really want a gradient so click the "Gradient" radio button then "Edit..." to bring up the "Gradient list" window, as we did before add a new gradient and name it "Shadow Fade", add the "100% Transparent" colour we created earlier and "Black" to the "Gradient colours", make sure they are in that order (shown in image 7). OK the edit and list requesters until you're back to the "Object attributes" requester, here we need to set the Pen Colour to "None" so we don't get an ugly line around the gradient. Click OK and the gradient should appear. Choose "Object/Arrange/Shuffle down" to move the gradient underneath the bar... now the shaded effect on the bar (image 8) looks much more convincing!

For the middle portion of the cover I want to lighten the background image to give a nice area to write on. Draw a rectangle starting at the left hand side of the yellow line across to the right hand side of the inlay about 10mm (two grid squares) up from the very bottom. In the "Object attributes" requester select a Solid fill and create a new colour as we did to create "100% Transparent" earlier. This time call the new colour "Translucent White", set the RGB sliders to R 255, G 255, B 255 and the opacity to 50%. When you get back to the "Object attributes" requester leave the "Fill colour" set to Solid this time but before you close the requester set the "Pen colour" to None to remove the line from the rectangle. Now you should see area of the image under the rectangle lightened considerably (image 9). Part of the new rectangle is obscuring our nice line and shadow, deal with that by selecting "Object/Arrange/Shuffle down" a couple

## Stepby Step..



5. The gradient settings for the gold line...



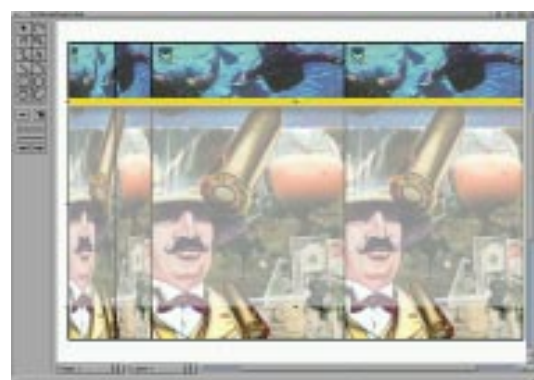
6. ...and their result.



7. The gradient settings for the shadow...



8. ...and their result.



9. The lightened area.

of times until the line and shadow are "above" the lightening rectangle. Notice how the shadow still works properly over the lightened area.

Lets put another bar and shadow at the bottom of the lightened portion, rather than create them again we can just copy and paste this time. Make sure you're in pointer mode (click the pointer tool if you're not) and click once on the yellow line, two handles should appear showing it's selected, hold down the "Shift" key and click anywhere in the shadow box, now both objects are selected. Release "Shift" then choose "Copy" from the "Edit" menu followed by "Paste". The pointer now turns into the frame icon as it did when we placed the image earlier. Move the pointer to the bottom left hand corner of the lightening box, when the pointer turns into a corner snap icon, click the left mouse button to paste in the bar and shadow (image 10).

Time for the finishing touches, some text to tell us what type of programmes are on this cassette, in my case this is going to be Drama. Click on the Text tool in the toolbar then click somewhere in the top portion of the cover panel to place the text cursor, type the word "Drama". Take a look at the font, if it's not to your taste use the requester from the "Text/Font..." menu item to change it, I chose Archibald which is one of the fonts supplied with DrawStudio. The font also looks a little small so before you OK the requester up the size to 30pt. Now change to the pointer tool and move the text into a good position by dragging it.

It still seems like the title could do with a bit more punch, how about we

give it a sort of bullet point? Click on the oval tool and draw a 10mm diameter circle (covering two grid squares in each direction) roughly over the "D" of "Drama". Now open the "Object/Attributes..." requester, turn off the Pen and select a gradient fill. To try and make this circle look like a ball we can use one of the supplied gradients but edited to use our colours. "Edit..." the gradient, select "Orange Sphere", click "New" and then "Edit". Because a gradient was selected when you clicked "New" DrawStudio has made a copy of it for you to edit, so rename the gradient "Yellow Sphere" and replace the orange colours in the gradient list with their yellow equivalent (remove a colour from the gradient list by selecting it then clicking "Delete"). OK back to your page and you should have a nice shiny yellow ball where your circle once was! Shuffle this down so it is below the word Drama. Take a look at image 11, the ball highlights the title nicely don't you think.

**TIP:** You may want to realign the word Drama so the "D" is bang in the middle of the circle, a good way of doing this is to select the word with the pointer tool and then use the cursor keys to nudge it into position, each press moves the selected object just a small amount. Holding shift while pressing the cursors moves in bigger steps.

And there we have it an attractive cassette case inlay ready to print, cut out and fold. I hope this tutorial has shown some of DrawStudio's power in combining bitmap and structured graphics and also that you will feel inspired to experiment with its many features.

## Stepby Step..



10. The gold bar copied and positioned.



11. Finished!

### Finally

As with any tutorial there are tonnes (I am a post-decimalisation child after all) of features I haven't been able to cover here so if you liked this please let me know and we'll consider a more advanced DrawStudio tutorial for a future Clubbed.

## Keep Up-to-Date with the clubbed-announce Mailing List

Clubbed now has its own Internet mailing list to keep connected readers (or anyone with an EMail address) better informed about the magazine. The mailing list, called clubbed-announce, is hosted by the YahooGroups service.

We post a minimum of one update to the list per month plus any important announcements, but your mail box will not be flooded because this list can only be posted to by the editor.

### How To Join

Subscribing to the list is free, just send a blank EMail to:

[clubbed-announce-subscribe@yahoo.com](mailto:clubbed-announce-subscribe@yahoo.com) (all one line)

Or go to the list page on the Yahoo Groups website, if you subscribe on the website you will need to register (if you haven't already for another list):

<http://www.yahoo.com/group/clubbed-announce> (all one line)

We hope the list will keep you better informed about Clubbed and encourage you to join.

### Next Issue

What's coming your way in issue 9?

#### Features

DTP - Publishing on your Amiga.

#### Reviews

- Mediator
- GoldEd
- Metaview
- Shogo
- Payback

#### Support

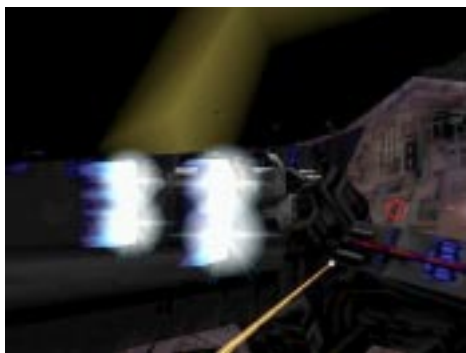
- Pagestream 4 Tutorial

#### Issue 8 Due: October 2001

NOTE: This is a provisional contents list and is subject to change without notice.



## Descent: Freespace



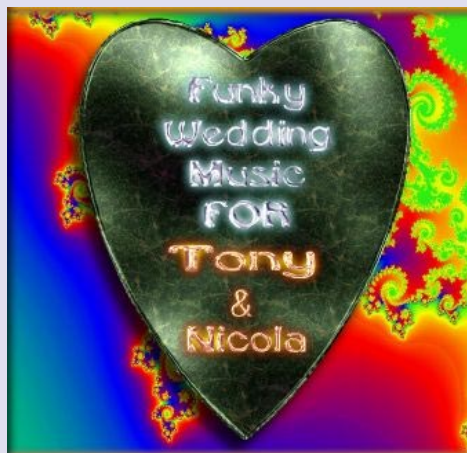
Take a look at our news item on page 6 for more information on this space combat simulator from Hyperion.



Visit the SEAL website at:  
[www.seal-amiga.co.uk](http://www.seal-amiga.co.uk)

## Gallery

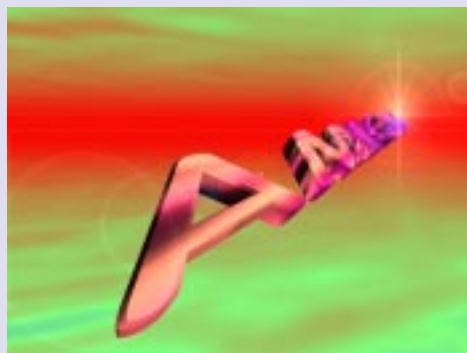
### Gary Storm



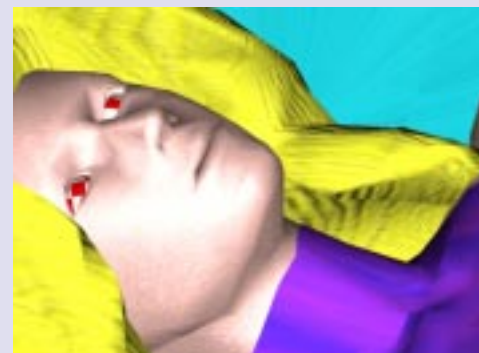
Gary's been hard at work with Candy Factory Pro to produce these images which he used for websites and CD covers.

All three images use the effect layering technique Gary described in his tutorial published in Clubbed issue 3.

### Roy Burton



Accel



Vectogirl



Vectoman



Badge

SEAL's resident 3D artist rendered the four 3D images above in Cinema 4D.

## DrawStudio Tutorial



The completed inlay from our tutorial on page 22. The finished page was printed from DrawStudio, the inlay was cut out (we find using a craft knife easier than scissors) and scored along the fold lines.